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# The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

MAR -2 1936
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VOLUME 79 OCTOBER 21, 1935 NUMBER 4

# Sturdy Strength

FIG. 1741
GASO Duplex Piston Pump, Diesel Engine Drive, 54-502 Bbls. per hour.

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# WHEN A MAJOR COMPANY BELIEVES A RECORD IS NEWS—*it usually is interesting reading!*

*Baker Cement Float Collar*

JULY-AUGUST, 1935

simply ... the end of the ... original crustation ... pletely replaced with a thin normal Triton deposition.

## Union Oil Sets Heaviest String of Casing

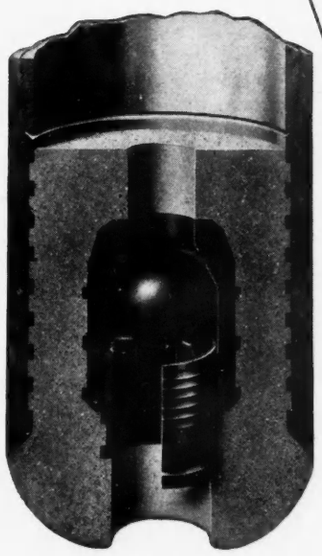
DURING THE month of July, the heaviest string of casing ever set in any well drilled in California, and the longest string of comparable size ever set in any part of the world, was run in and cemented off by the Union Oil Company. This occurred in the Lillis Welch No. 1 well which is being redrilled by the company under contract with the North Kettleman Oil and Gas Company, and which is located in the northwesterly portion of Kettleman Hills about two and a half miles northwest of the Union Oil Company's Amerada lease.

After a number of unsuccessful attempts to redrill the well, the company removed the original 7-inch casing and resumed work from the end of the 11¾-inch casing at 6,710 feet. In drilling ahead, there arose the difficulty of keeping such a large amount of open wall in condition, so, upon reaching 9,085 feet, 8⅝-inch casing was set to 9,081 feet.

This record string weighs 36 pounds to the foot. Standard casing and couplings were used, with the exception of the last 2,900 feet which is special, high tensile strength casing with thin couplings. The total weight from grass roots to bottom is 326,916 pounds—about the weight of a passenger locomotive and tender.

At present the well is being drilled ahead around 9,200 feet, and it is planned to set 6⅝-inch casing to about 10,900 feet. If successful, the weight of this string will exceed 305,000 pounds.

*Extract from The Union Oil Bulletin July - August, 1935.*



***Sectional view of Baker Cement Float Shoe showing modern internal construction of concrete and a minimum amount of Bakelite.***

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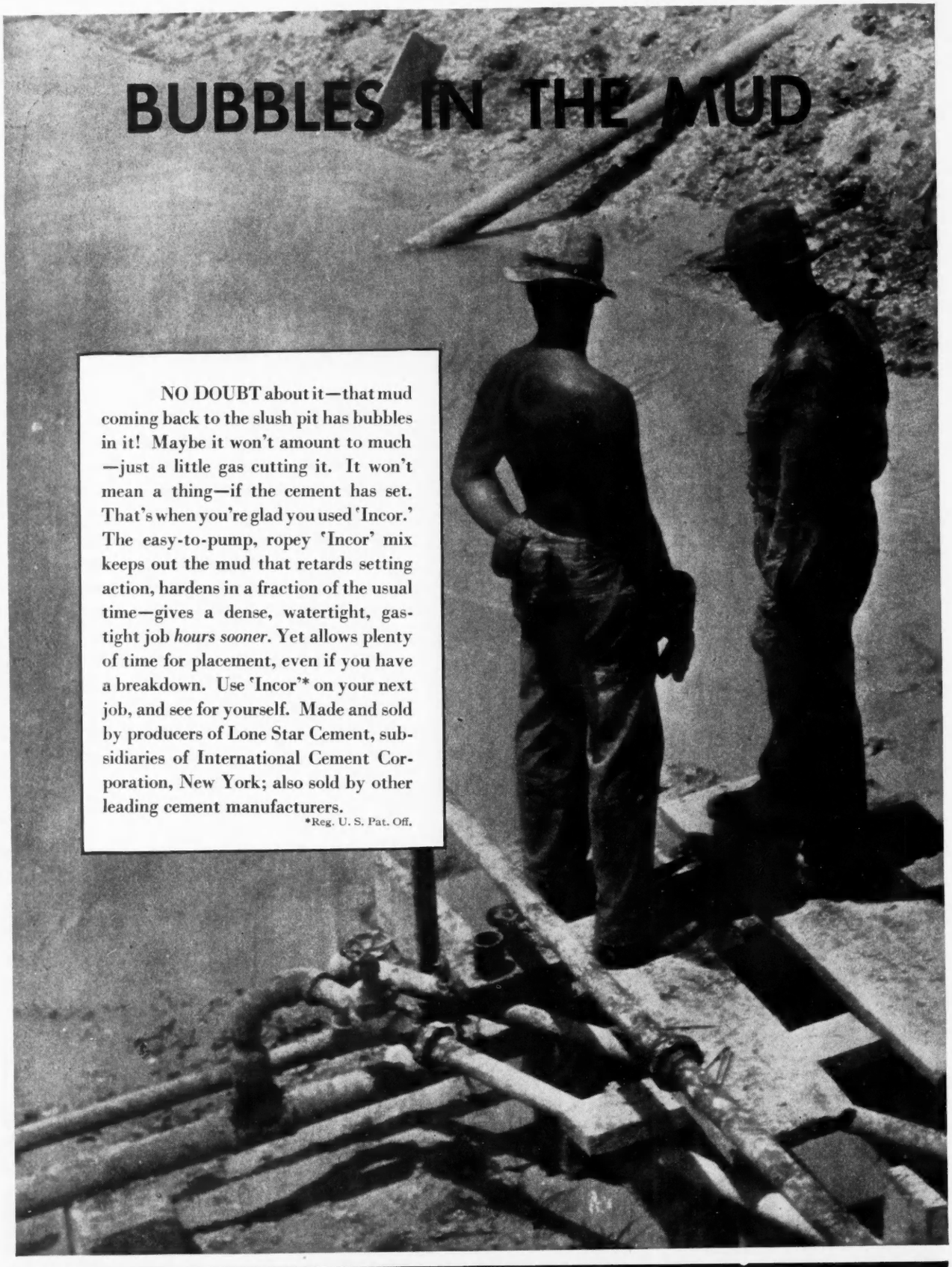


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# THE OIL WEEKLY

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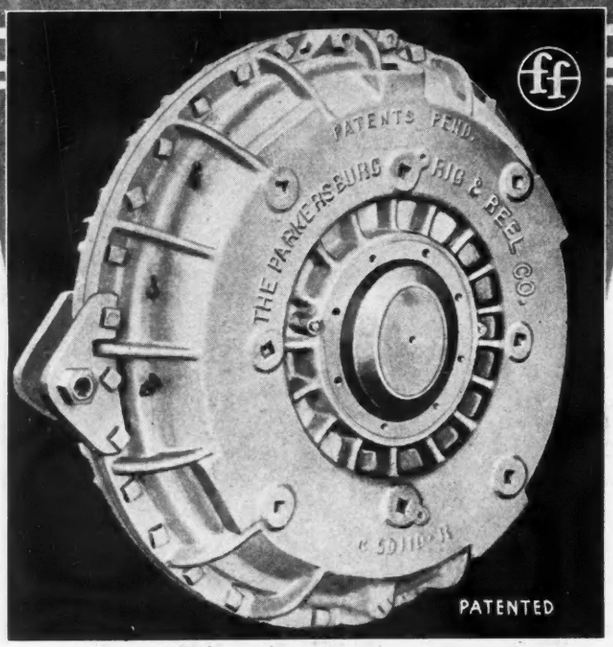
# THE OUTSTANDING DEVELOPMENT IN DEEP DRILLING EQUIPMENT

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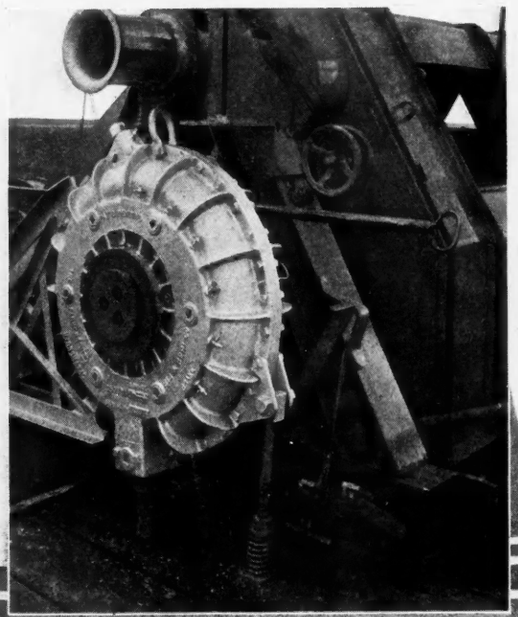

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THE OIL WEEKLY
FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN
ENGINEERING • NEWS • STATISTICS

WARREN L. BAKER, Editor

# . . . this Week

THE Bureau of Mines has recommended that the allowable production of the United States for the month of November be raised 9500 barrels daily to 2,563,700 barrels. This increase, despite the customary seasonal slump, is the result of continued heavy export demand, increased use of crude as fuel oil and the need for building up gasoline inventories. The forecast for November demand represents a six percent boost for the figures for November, 1934. **Page 8.**

THE Texas Railroad Commission has completed gauging 43 key wells in the East Texas field. The new potential figures show a 25 percent decline during the past year and a half. The new potential figure for the field is 10,000,000 barrels as compared with 14,000,000 barrels previously. The highest potential was 1017.24 barrels an hour. Twenty-five of the key wells showed a combined loss of 614.55 barrels per hour, while 14 gained 468.97 barrels. **Page 9.**

THE allowable production for the State of Texas during the month of November will be 12,000 barrels higher than during October according to the order issued Friday by the Texas Railroad Commission. Despite the fact that East Texas showed a potential decline of 25 percent and it was asked that the per well allocation in the field be raised from 2.8 percent of the potential to 3.2 percent, the commissioners did not boost the proration factor. **Page 10.**

THERE is evidence to support the belief that the United States will experience a shortage of crude oil within five to eight years, although there will be no exhaustion for many years. It is estimated the nation has a reserve of 12,000,000,000 barrels, which is a 12-year supply, but it will be impossible to produce the entire reserve within the 12-year period; consequently, the thought of a crude shortage. The first results of a shortage will be an increase in imports and higher crude prices. The latter may cause some to use substitutes for petroleum, which now are unable to compete with the low prices. An interesting discussion on the future crude reserve status of the nation will be found in this issue. **Page 21.**

MID-CONTINENT refined markets reached their highest level in the past five years, when they advanced slightly the past week. This is particularly encouraging in view of heavy overproduction in California and weaken refined prices in the same state, and that the increase came when a normal seasonal decline in consumption could be expected. Reduced stocks and continued high demand are the principal factors contributing to the strength of refined prices. **Page 43.**

A PIPE line company has been able to effect a saving on its pump lubrication costs by simply moving the sight-feed lubricator five inches toward the crank from its previous location. This brought the savings up considerably, but still desiring to save more of the lubricating oil being wasted, the company engineers designed an auxiliary gadget and installed it on the pump. **Page 31.**

THE new Garden Island Bay field recently opened at the extreme south tip of the Mississippi River Delta offers some very interesting drilling problems because of the soft, marshy surface. Due to the peculiar surface conditions, steel barges are floated through canals to well locations and used as foundations for all drilling equipment. Because of the silty soils penetrated in drilling, a large number of casing strings must of necessity be set in the field. **Page 38.**

THE estimation of reserves in prorated limestone fields is an exceedingly complex problem due to fluctuation in the allowable rates of oil production and because of the reservoir characteristics. The best method of attacking the problem apparently lies in the analysis of the physical reactions of the reservoir to the withdrawal of fluids contained therein. It also is necessary to determine whether the fields are under volumetric control or active hydraulic content, because of the different reactions of the reservoir pressure to withdrawals **Page 33.**

## The Oil Man's Calendar

**OCTOBER**

*21* *Louisiana-Arkansas Division, Mid-Continent Oil & Gas Association, Shreveport, Louisiana.*

**NOVEMBER**

*4-5* *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*

*11-14* *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*
*California Natural Gasoline Association, Los Angeles.*

**DECEMBER**

*10* *Mid-Continent Oil & Gas Association, Tulsa, Oklahoma, (Date tentative).*

**MARCH, 1936**

*19-21* *American Association of Petroleum Geologists, Tulsa, Oklahoma.*

**APRIL**

*16-17* *National Petroleum Association, Cleveland, Ohio.*

*20-25* *Oil Equipment & Engineering Exposition, Houston, Texas.*

**MAY**

*16-23* *International Petroleum Exposition and Congress, Tulsa, Oklahoma.*

# *Raise Allowable*

## BUREAU RECOMMENDS 9500-BARREL INCREASE DURING NOVEMBER

WASHINGTON, D. C.

CONTINUED heavy export demand, increased use of crude as fuel oil and need for building up gasoline inventories are seen as requiring an increase of 9500 barrels a day in the November production of petroleum, according to the monthly forecast issued October 18 by the Bureau of Mines. The recommended production for November is placed by the Bureau at 2,563,700 barrels per day as against 2,554,200 barrels for the current month. The increase, it is pointed out, is recommended in the face of the seasonal decline in consumption, which normally occurs at this season of the year. The forecast of the domestic demand for motor fuel for November is 34,530,000 barrels, much below the actual figure of the corresponding period last year, but representing an increase of about six percent over the "normal" demand in November, 1934, when abnormally high refinery deliveries follows drastic cuts in retail prices.

### Raise Export Estimate

Exports of motor fuel declined both in July and August from the peak reached in June, but the total for those three months so far exceeded that of a year ago that the bureau sees little doubt that the war scare has produced a substantial stimulation in foreign shipments of petroleum. "Whether this stimulation will continue and whether the usual seasonal decline will be experienced remains to be seen," the bureau commented, "nevertheless it was thought advisable again to raise the estimate of exports, which for November is placed at 2,310,000 barrels."

Direct sales of natural gasoline and benzol are estimated at 700,000 barrels, the same as for October, but stocks, which on September 30 were approximately 50,500,000 barrels, are below the objective for that date established last spring by some 500,000 barrels. Accordingly, the bureau feels that "regardless of whether stocks are reduced by the 960,000 barrels contemplated for October, it is evident that stocks will soon be as low as is economically desirable. Therefore, provision has been made for a small seasonal build-up in inventories in November, the increase contemplated for that month being 480,000 barrels.

**United States**
**November Allowable Production**

| State— | Allowable November | Production October |
|---|---|---|
| Texas | 1,027,600 | 1,025,500 |
| California | 505,000 | 497,700 |
| Oklahoma | 492,000 | 492,000 |
| Kansas | 143,300 | 146,100 |
| Louisiana | 127,100 | 125,100 |
| New Mexico | 52,200 | 50,600 |
| Michigan | 40,400 | 39,500 |
| Pennsylvania | 40,000 | 40,000 |
| Wyoming | 33,900 | 34,300 |
| Arkansas | 29,100 | 29,200 |
| Kentucky | 14,200 | 14,300 |
| Montana | 11,400 | 11,000 |
| Illinois | 10,900 | 10,800 |
| Ohio | 10,400 | 10,700 |
| New York | 10,000 | 10,200 |
| West Virginia | 10,000 | 10,000 |
| Colorado | 4,000 | 4,200 |
| Indiana | 2,200 | 2,100 |

### Curtail Gasoline

On the basis of these factors, the required production of finished and unfinished gasoline for the coming month will be 36,620,000 barrels, a daily average of 1,220,700 barrels compared with 1,226,800 barrels in October, and, since November in recent years has been the leading month in the utilization of natural gasoline in blends, the estimate of 3,290,000 barrels (nine percent of total production) will leave 33,330,000 barrels to be made from crude. With the percentage yield of gasoline generally lower in November, the bureau places the average for the month at 44.63 compared with 44.92 for October, resulting in a required refinery throughput of crude of 75,680,000 barrels.

Imports, lately averaging about 3,000,000 barrels a month, are placed at 3,020,000 barrels. Exports are estimated at 4,250,000 barrels, and transfers to fuel and losses have been raised to 2,200,000 barrels. Provision is made for the withdrawal from stocks of 12,000,000 barrels, bringing the total recommended production for the month to 76,910,000 barrels.

### Boost Several States

In allocating the month's production among the states, the outstanding changes made were recommendations for increases in California, Texas, Louisiana, New Mexico and Michigan. The increase in California, it was explained, is due to a number of causes including as the most important an increase in the relative proportion of gasoline consumption and an expected decline in yield. The gain in Texas is due to increases in the estimates of exports, while increases in the other states were related to the steady rise in their production. Recommended daily production for the several states is given in the accompanying table.

## TEXAS GAS SUITS

### State seeks to enjoin gas order violation

AUSTIN.

ATTORNEY General McCraw filed suits in the 126th District Court last week seeking to enjoin Texoma Natural Gas Company and Texas Panhandle Gas Company from violating gas proration orders of the Texas Railroad Commission.

Judge W. F. Robertson issued these injunctions, then stayed the orders, which will be laid before the Federal Court in Houston on October 28 when a hearing of the case on its merits begins.

The two companies were granted injunctions by a three-judge Federal Court the week before, which will stand pending a test of the law in the State courts.

McCraw explained that the suits were filed under provisions of a Federal statute which provides that if a suit is brought in a state court to enforce the orders complained of and which are pending in a three-judge Federal Court, the state court has jurisdiction, and the Federal Court shall stay proceedings to await the outcome of the suits in the state courts.

In a statement issued later in the week, the Railroad Commission and the attorney general joined in saying that they thought it wiser to determine the validity of the statute, H. B. 266, the new gas waste control law, as interpreted by the state courts, before having its validity considered by the Federal Courts.

## SEEK BIG FINES

### $7,000,000 penalty for conservation violation

AUSTIN.

SUITS for penalties totaling almost $7,000,000 for alleged violation of the conservation laws were filed by the attorney general in the District Court at Austin last week. Receivership hearings in the two cases are to be held shortly.

Named defendant in one suit in which penalties of $6,018,000 were sought were Ortiz Oil Company, J. I. Staley, J. H. Staley, J. C. Wynne, J. I. Dyer, Century Pipe Line Company, Century Refining Company and Ozozo Refining Company.

The defendants were charged with overproduction, failure to file correct daily reports, failure to file correct monthly reports, failure to file proper pipe line reports, receiving and processing illegal oil.

Trinity Refining Company, V. E. Jackson, J. B. Sowell, T. W. Sowell, C. B. Sowell, the Minor Pipe Line Company, Lone Star Refining Company, and Sowell Brothers were named defendants in the second suit, and penalties of almost $1,000,000 were asked.

Charges in this suit included conspiracy and bribery, as well as running excess oil and violation of the orders governing the filing of reports.

It was alleged that the defendants conspired with the landowner to permit them to run excess oil, paying 25 cents per barrel for the royalty interest. Subsequently it is alleged that the defendants bribed the landowners agents to conceal from him the fact that they were producing daily 2000 barrels of excess oil instead of the 200 barrels agreed upon.

# *Potential Declines*

## EAST TEXAS GAUGE OF KEY WELLS REGISTERS A 25 PERCENT DROP

TYLER.

ONLY 43 key wells were gauged by the engineering department of the Texas Railroad Commission in taking a new potential gauge in the East Texas field. These 43 key wells will be the basis for the preparation of a revised potential production contour map of the East Texas field to become effective November 1. Gauging of these 43 key wells to ascertain their hourly open flow capacity was completed October 15, with 25 producers registering a combined loss of 614.55 barrels in hourly rating while 14 others gained 468.97 barrels. Four new additions were made to the list of key wells so as to partially offset the large number discarded. A tabulation from the results of the potential gauges shows that the field has declined 25 percent in potential production since the last potential gauge taken a year and a half ago. The new potential figure for the field is 10,000,000 barrels compared with 14,000,000 barrels on the preceding gauge, despite the completion of many wells during the past 18 months.

### May Increase Factor

It is quite evident that a large number of additional East Texas wells will be relegated to the marginal group when the new map is issued, unless the commission acts on the demands of operators for a higher proration factor. Currently the field is producing 426,871 barrels daily from 18,897 completed wells, with 6723 of this number carried as marginal wells. The average output per well now is 22.48 barrels daily, with a production range from 20 to 28.22 barrels daily between wells.

However, it is considered likely in view of the potential decline that an adjustment in the proration percentage is probable. At a statewide hearing last week it was suggested that 3.2 percent potential be the new proration factor, but the commission did not do this in its new order. At present the wells are prorated to 2.8 percent of the rated hourly flow. With 2.8 percent as the factor, each key well and all producers assigned to their respective zone must show a potential of more than 714 barrels hourly to avoid being classed as a marginal well, which classification carries a flat allowable of 20 barrels daily. Four of the 43 key wells serving as a basis for the next potential map fell below 714 barrels per hour, leaving 39 key wells to fix the allowable for non-marginal producers. However, if the proration factor is increased to 3.2 percent the non-marginal classification will be changed.

Under the present set up of using 2.8 percent as the proration factor, the greater portion of the Joiner area, including all Smith County, would be classified as marginal well territory through failure of their key wells to yield sufficient oil to earn more than the 20-barrel daily minimum. Only one key well in Smith County was included, and it increased its flow from 556.97 to 633.04 barrels per hour, while no key wells in Upshur County, site of a large number of producers, are to be incorporated in the forthcoming potential map.

### Well Ownership

Majors are identified as the owners of 28 of the key wells, while the remaining 15 belong to 13 separate independent concerns. All wells were gauged in the presence of witness after advance notice was posted by the commission for a period of two hours, flowing through two four-inch discharge lines on casing and open 2½-inch tubing. The average for the two-hour period determined the official potential. Well owners are charged 50 percent of the potential output on future proration allowables, but the other 50 percent is exempt as compensation for making the test. Considerable expense is involved in rigging up key wells so as to attain the maximum flow. Tankage, separator, well connections and flow lines are lined up to virtually eliminate back pressure, and most of the lines were free of sharp angles. Operators have learned how to get the most out of a well in the two-hour period, and usually succeed.

Humble Oil & Refining Company's R. E. L. Silvey 50-A, T. J. Martin Survey, Rusk County, listed last week as showing the highest potential stands as the record producer with an hourly flow of 1017.24 barrels, or a gain of 56.07 barrels as compared to reading taken August 14, 1934. Magnolia Petroleum Company's F. M. Fonville 3, Wm. Tyndale Survey, Gregg County, was discarded as a key well when its rating dropped from 950 to 569.73 barrels hourly. No elaborate preparations were made to facilitate the flow from the casing and tubing.

**Comparative Hourly Production Performance of Key Wells in the East Texas Field**

| Company, Well and Survey— | Date Gauged | Hourly Flow | Date Gauged | Hourly Flow | Bbls. Loss | Bbls. Gain |
|---|---|---|---|---|---|---|
| **GREGG COUNTY** | | | | | | |
| Arkansas F. O. Co's. Harrison 1-A, Robinson | (*) | ..... | 10-14-35 | 614.33 | ..... | .... |
| Atlantic O. P. Co's. Judge 60, F. W. Johnson | 9-13-34 | 984.72 | 10- 4-35 | 988.79 | ..... | 4.07 |
| Gulf Prod. Co's. T. Anderson 4, J. Ruddle | 9-15-34 | 781.47 | 10- 8-35 | 781.40 | .07 | .... |
| Wm. Clayton 7, L. B. Outlaw | 9-15-34 | 821.16 | 10-14-35 | 823.44 | ..... | 2.28 |
| J. C. Judge 61, F. W. Johnson | 4- 8-34 | 1007.79 | 10- 3-35 | 1000.06 | 7.73 | .... |
| Humble's A. Carter 9, D. Ferguson | 7-18-34 | 900.79 | 10- 8-35 | 944.94 | ..... | 44.15 |
| W. W. Holland 15, T. Allen | 7-17-34 | 900.28 | 10-11-35 | 929.16 | ..... | 28.88 |
| Magnolia's F. M. Fonville 3, Wm. Tyndale | 7- -34 | 950.00 | 10-10-35 | 569.73 | 380.27 | .... |
| Patrick Prod. Co's. J. B. Watson 1, M. Van Winkle | 7-11-34 | 934.55 | 10-11-35 | 926.63 | 7.92 | .... |
| Rowan-Nichols Oil Co's. B. C. Todd 3-A, W. H. Castleberry | 7-22-34 | 926.14 | 10-14-35 | 964.19 | ..... | 38.05 |
| Sinclair Prairie's A. A. King 32-A, W. P. Warriner | 7-18-34 | 808.14 | 10- 5-35 | 798.93 | 9.21 | .... |
| Stanolind's O. J. Albright 8, W. H. Hart | 7-13-34 | 991.85 | 10- 1-35 | 980.28 | 11.57 | .... |
| Christian 1-A, H. Hathaway | (*) | ..... | 10-15-35 | 892.68 | ..... | .... |
| C. J. Dollahite 1, D. Sanchez | 7-28-34 | 735.24 | 10- 5-35 | 735.18 | .06 | .... |
| M. LeMaire 3, H. Hathaway | 8-15-34 | 861.77 | 10- 8-35 | 875.40 | ..... | 13.63 |
| Superior Oil Co's. L. C. Ingram 1, W. E. Pasteur | 7-13-34 | 930.50 | 9-26-35 | 1003.42 | ..... | 72.92 |
| Tide Water's M. G. Barton 24, S. R. Hollingsworth | 5- 9-34 | 924.58 | 9-27-35 | 913.10 | 11.48 | .... |
| Lake Devernia 25, W. E. Pastuer | 7-30-34 | 982.74 | 10- 9-35 | 1004.96 | ..... | 22.22 |
| Weaver-Crim Corp's. Ben Laird 11, W. P. Chism | (*) | ..... | 10- 8-35 | 991.92 | ..... | .... |
| **RUSK COUNTY** | | | | | | |
| Bay Oil Corp's. B. B. Peterson 6, J. S. Carruthers | 7-10-34 | 953.25 | 9-28-35 | 1003.78 | ..... | 50.53 |
| Bussa Oil Co's. W. P. Brett 1, F. Cordova | 8-14-34 | 695.12 | 10- 3-35 | 591.01 | 104.11 | .... |
| Bowles Oil Co's. D. Wells 6, M. Y'Barbo | 7-16-34 | 718.88 | 10-12-35 | 703.66 | 15.22 | .... |
| R. W. Fair's fee 6, M. J. Pru | 7-28-34 | 868.71 | 10- 8-35 | 814.30 | 54.41 | .... |
| Gulf's W. A. Hindman 5, J. C. Snow | 7-11-34 | 964.37 | 10- 9-35 | 964.55 | ..... | .18 |
| Motley 30, Wm. Killen | (*) | ..... | 10-15-35 | 822.24 | ..... | .... |
| Humble's J. Bell 7, S. P. Hollingsworth | 7-18-34 | 818.75 | 10- 9-35 | 797.15 | 21.60 | .... |
| A. D. Blackwell 20, F. Cordova | 7-20-34 | 891.74 | 10- 3-35 | 805.81 | 85.93 | .... |
| L. D. Crim 62, W. P. Chism | 7-13-34 | 921.34 | 10- 8-35 | 967.55 | ..... | 46.21 |
| Sol Dennis 7, A. Melton | 7-20-34 | 869.15 | 10- 9-35 | 846.35 | 22.80 | .... |
| S. D. Glover 12, A. Melton | 8-14-34 | 806.05 | 10-13-35 | 802.05 | 4.00 | .... |
| H. Sexton 4-A, M. McCabe | 7-19-34 | 949.44 | 10-11-35 | 943.77 | 5.67 | .... |
| J. H. Silvey 5-B, Geo. Berry | 7-20-34 | 968.60 | 10- 8-35 | 892.82 | 75.78 | .... |
| R. E. L. Silvey 50-A, T. J. Martin | 8-14-34 | 961.17 | 10- 8-35 | 1017.24 | ..... | 56.07 |
| J. Thompson 6, J. Smith | 7-20-34 | 1004.02 | 10- 3-35 | 967.03 | 36.99 | .... |
| Hunt Prod. Co's. R. W. Fair 5-A, M. J. Pru | 7-17-34 | 832.38 | 10-15-35 | 846.20 | ..... | 13.82 |
| R. W. Fair 17-C, M. J. Pru | 7-19-34 | 934.58 | 10-12-35 | 899.55 | 35.03 | .... |
| W. R. Moore 1, M. J. Pru | 8-15-34 | 927.26 | 10-14-35 | 905.66 | 21.60 | .... |
| S. S. Laird Oil Co's. J. N. Peterson 6, R. E. Winn | 8-11-34 | 854.00 | 9-27-35 | 842.50 | 11.42 | .... |
| C. L. McMahon's S. S. Laird 2, R. W. Smith | 8- 8-34 | 900.00 | 10-15-35 | 898.55 | 1.45 | .... |
| McMahon-Dunning's J. N. Peterson 4, R. E. Winn | 7-17-34 | 834.82 | 10-13-35 | 832.78 | 2.04 | .... |
| Marathon's W. T. Grissom 18, J. C. Woolam | 9-13-34 | 721.57 | 10-14-35 | 713.10 | 8.47 | .... |
| Sinclair Prairie's I. L. Kinney 47, J. B. Cadena | 7-18-34 | 776.71 | 10- 7-35 | 729.38 | 47.33 | .... |
| Standard Oil Co. (Kan's.) J. W. Wheelis 5, D. Shaw | 7-10-34 | 563.06 | 10- 7-35 | 550.51 | 12.55 | .... |
| **SMITH COUNTY** | | | | | | |
| Sinclair Prairie's A. S. Jarvis 22-C de los Coy | 7-19-34 | 556.97 | 10- 8-35 | 633.04 | ..... | 76.07 |

(*) Indicates new key well.

# *Texas Allowable*

## RAISE STATE'S ALLOCATION; EAST TEXAS UNCHANGED

AUSTIN.

THE Texas Railroad Commission has issued its new proration order effective November 1, fixing a total allowable of 1,049,165 barrels for the state, an increase of 12,554 barrels over the allowable on October 16. Operators filed with the commission nominations for the purchase of 1,052,000 barrels of crude during November and the new allowable fixes production at 2835 barrels below this figure. No report on consumer demand from the Bureau of Mines had been received when the order was issued.

### East Texas Not Revised

The East Texas allowable remains at 2.8 percent of the hourly potential, based on the old tests showing approximately 14,000,000 barrels. The new potential map prepared by the commission will not be installed this month, according to Gordon Griffin, chief petroleum engineer for the commission. An estimated allowable of 427,000 barrels for the field on November 1, was used in determining the total state allowable. New allowables for other districts were Panhandle, 61,300, an increase of 7000 barrels; North Texas, 69,337 barrels, a reduction of 2137 barrels; West Central Texas, 59,337 barrels, a reduction of 2137 barrels; East Central Texas, 47,784 barrels, an increase of 926 barrels; West Texas 139,558 barrels, an increase of 4702 barrels; Southwest Texas, 107,980 barrels, a raise of 2109 barrels; Gulf Coast, 156,043 barrels, a raise of 1570 barrels.

An important feature of the order was the restoration of the three percent cuts ordered for Yates, Conroe and Van on September 23. This resulted in an allowable of 35,733 barrels for Van, a 1251 barrel increase; an increase of 1383 barrels for Conroe, bringing the allowable to 39,525 barrels; an allowable of 39,124 barrels for Yates, an increase of 1369 barrels per day. The allowables in the Government Wells fields were revised to include a 40-barrel top for the best wells, in line with a request filed at the state proration hearing.

The north field was increased 727 barrels to 12,000 barrels per day, while the south field was allocated 6320 barrels, a raise of 491 barrels. The method of allocation in the Greta field was revised to provide a separate allowable for production above 5000 feet. A total field allowable of 14,930 was ordered, an increase of 3100 barrels. The nine deep wells were allocated 880 barrels of the total, and the remainder will be distributed among the shallow producers. This means an increase of 4000 barrels for the shallow wells, as the allowance for the deep wells had been taken from the shallow well allowance formerly. The Dirks field was raised 830 barrels to 3205 barrels per day. Loma Novia was raised 760 to 4000 barrels, and a 480 barrel raise at O'Hern brought the field allowable to 1680 barrels. Plymouth received a 900-barrel increase resulting in a total allowable of 3450 barrels, and an increase of 716 barrels for the new Saxet field brought the allowable there to 3266 barrels.

### Gulf Coast Change

In the Gulf Coast, Anahuac was raised 600 barrels to 1800 barrels, and New Batson was increased 497 barrels to 1527 barrels. A 600 barrel increase at Hastings brought the allowable there to 3200 barrels. The Old Mykawa field was cut 445 barrels to 285 barrels, while an increase of 2285 barrels at New Mykawa resulted in an allowable of 4775 barrels. Tomball was raised to 6250 barrels per day.

### West Texas Fields

In West Texas an increase of 2000 barrels per day for the Church and Fields pool resulted in an allowable of 7830 barrels, and an increase of 1325 barrels for Gulf-McElroy, resulted in an allowable of 5190 barrels for that field. Ector-Penn received an increase of 1000 barrels, bringing the field allowable to 6088 barrels. A similar increase at Sayre resulted in an allocation of 2650 barrels for that field. Hendricks was cut 500 barrels to 15,650 barrels. The North Ward field was raised 2000 barrels to 7650 barrels. Reductions ordered in this and other districts were exceedingly small, and were instituted in marginal fields, most of which had demonstrated their inability to make allowables previously assigned.

Slight increases were ordered in fixing allowables for gas wells. The East Panhandle area was granted an increase of 2,000 MCF, with a field allowable of 99,000 MCF. The West Panhandle allowable was fixed at 390,000 MCF, an increase of 10,000 MCF. The Panhandle sour gas allowance was fixed at 296,000 MCF, a cut of 64,000 MCF. Commission gas engineers said that this difference would be made up by the 100,000 MCF increase from water wells in the area, the gas from these being suitable for the manufacture of carbon black. The allowance for production of sweet gas outside the Panhandle was 351,744 MCF.

## COLLECTIONS UP

### Federal gasoline taxes exceed a year ago

WASHINGTON.

FEDERAL gasoline tax collections in September reached a total of $16,054,296 as compared with $13,033,237 in the same month last year but were more than $4,000,000 under the August total of $20,477,877, according to figures just compiled by the Bureau of Internal Revenue. Collections for the first quarter of the fiscal year, however, showed a gain of $8,000,000, totaling $48,545,716 against $40,416,950 in 1934.

Receipts from the processing of crude petroleum totaled $157,834 against $156,067 last year, being about $20,000 under the August total of $178,083. For the quarter, the total was $509,131 Against $345,902 last year, an increase of $163,229. Lubricating oil tax receipts in September were $2,364,541 against $2,844,295 in August and $1,920,483 in September, 1934, bringing the total for the quarter to $6,788,439 against $6,201,836, an increase of $586,603.

## NEW TAX BILLS

### Industry likely to bear brunt of new revenues

AUSTIN.

BILLS introduced in the Texas Legislature last week indicated that the oil and gas industry may come in for a full share of the single shot tax system advocated by a majority of the members of both Houses.

This is the beginning of the second called session of the Legislature, and in a vigorous message Governor Allred insisted that the members pass a bill providing for old age pensions and raise sufficient revenue to sustain them.

### 25 Oil Tax Bills

Although the Governor declared he was against the general sales tax, several members sponsored a bill of this kind. However, of 36 bills introduced on the first day of the session, 25 of them were measures which if enacted would increase directly the tax bill of the oil and gas industry.

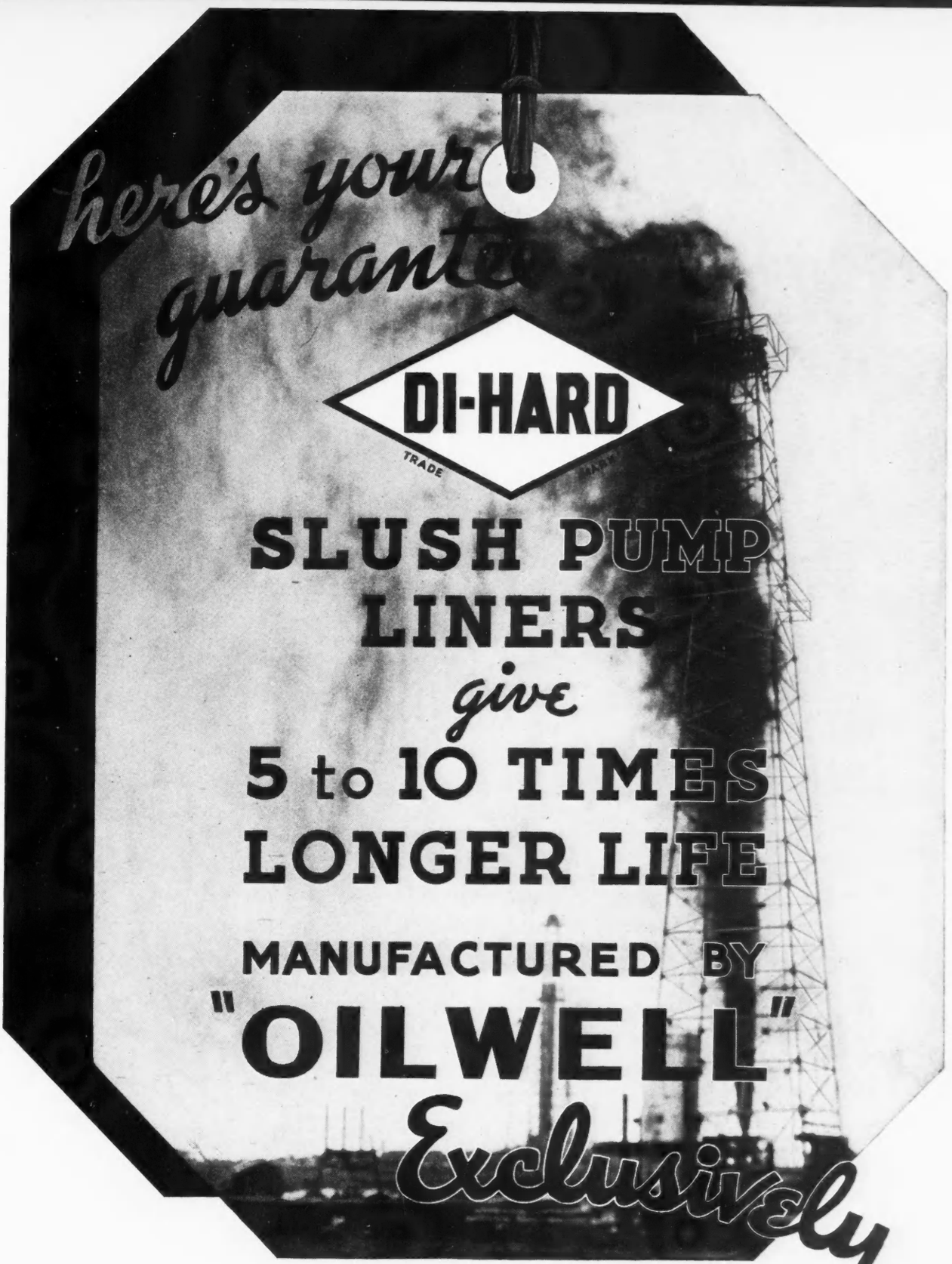
These bills included increases in the gross production tax on crude oil, in one instance as much 200 percent, an increase of the gross production tax on natural gas, a one cent raise in the gasoline tax, taxes on gross receipts and utilities.

Two sales tax bills introduced in the Senate as part of old age pension bills were promptly eliminated by the State Affairs Committee.

In the House, Representative W. E. Jones, chairman of the Revenue and Taxation Committee, announced that he did not expect to hold public hearings on the bills, most of which were considered during the special session concluded on October 15.

Hearings will probably be held before Senate Committees, however, if bills are passed by the House. During the last session oil company representatives who appeared in opposition to a gross production tax became so confused by a graduated tax proposal that they ended arguments by urging the House Committee on Revenue and Taxation to approve a bill providing for a flat tax of three cents per barrel, an increase of 50 percent above the current rate.

The Legislature must raise vast sums of money, not only for the pensions, but for the deficit which is increasing rapidly. Because the session terminates at the end of 30 days and no well-organized tax program has been prepared, any measures which are passed, except the sales tax, will necessarily apply to some particular industry.

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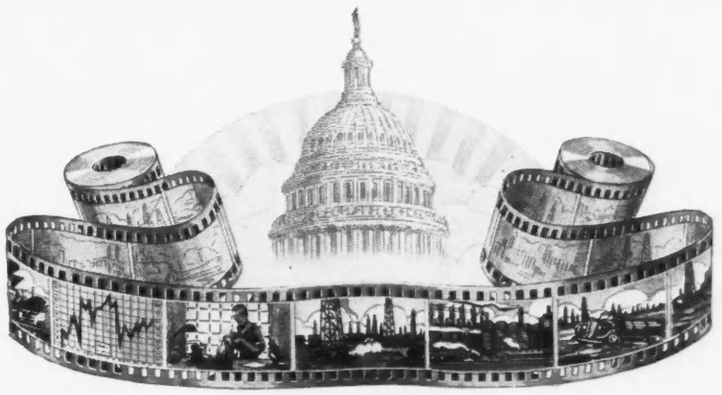
# The Changing Panorama



THE OIL WEEKLY'S COMPOSITE VIEW OF INDUSTRY

Edited by JACK LOGAN, Associate Editor

A NOTEWORTHY feature of the picture in oil lately has been the pronounced strength displayed by the markets. California has continued down in the dumps, with overproduction of crude keeping prices depressed from well to filling station. But in the rest of the country prices have been firm or strong, at comparatively high levels.

### Mid-Continent Market Strong

In the Mid-Continent last week gasoline tank car prices were generally one eighth-cent per gallon higher than in the previous week. The quotations are back up to the peak levels of the year, and as high as at any time in the past five years. The prices are nearly twice as high as at this time last year, when a flood of hot oil in East Texas was largely responsible for an exceptionally depressed market.

DEMAND ABOVE NORMAL.—The improvement of gasoline tank car prices last week was attributed largely to emergency buying by large companies, with demand holding up above expectations for this time of the year. Weather conditions throughout the country had continued conducive to large gasoline consumption, although this season normally brings a diminishing consumption.

HOT OIL DECREASES.—Another influence strengthening prices has been further reduction of hot oil production in East Texas, following the recent inauguration of Captain E. N. Stanley as new chief of proration in the big, troublesome field. Hot oil output there was reported last week to have declined to around 37,000 barrels daily from about 45,000 barrels per day the previous week.

PRICES AT 1935 PEAKS.—At Oklahoma and North Texas refineries, low octane U. S. motor gasoline late last week was bringing 4¾ cents a gallon, while standard or middle grade was priced at 5¼ cents, and high octane material at 5⅝ cents. In East Texas the two lower grades were one-eighth cent lower than in Oklahoma, but the premium grade was the same.

CALIFORNIA UNCHANGED.—The fog of overproduction and depressed markets has held tenaciously over the California oil industry, and so far there has not been any indication that the sun will break through the mist in any immediate improvement of prices of either crude oil or gasoline.

Although crude production of the state normally is lower in the latter half of the month than in the opening half, that customary trend has not been particularly reassuring to the industry lately. For the output could come down substantially from the early level and still be disturbingly excessive. At the middle of October California's crude production was running about 50,000 barrels a day above the 590,700-barrel daily limit within which the independent producers sought to hold the state's output. And even that limit, laid down as the economic limit for the last quarter of 1935, is substantially higher than the output recommended by the Bureau of Mines.

BETTER PRICES, IF.—There have been some expressions of hope that California crude prices might be raised at least part of the way back to their pre-September levels—if production is reduced to and stabilized around the 590,700-barrel limit. But that "if" doesn't leave room for much enthusiasm. It has been nearly five months since the Supreme Court turned thumbs down on the NRA and therefore the oil code. And with that much time to get going, voluntary proration still is limbering up back of the starting line.

### API Meeting May Help California

A circumstance that offers some hope for improved markets in California is the fact that the American Petroleum Institute will hold its annual meeting at Los Angeles, November 11-14. It is only natural that leaders in California's oil industry should be especially desirous of putting their house in order before the guests arrive.

Moreover, there is some possibility that stabilization for California's oil industry may be promoted during the meeting, if not before. The brains of the

whole American petroleum industry possibly might offer the hosts some valuable suggestions.

At any rate, as the matter now stands, California is in a position to profit marketwise by the meeting. It is in a position reminiscent of a speech by a Mount Pleasant, Texas, Methodist pastor that once gained for his city the annual statewide conference—back in the flowering phase of the prohibition era. Spokesmen for other towns and cities bidding for the meeting sang the glories of their municipalities, counting off the hotel accommodations, ample church facilities, and other advantages. But an entirely different approach was taken by the spokesman from Mount Pleasant, a county-seat in East Texas. He referred unblushingly to the reputation which the town and surrounding country then had, far and near, as an important center for moonshine whisky making. "Our hotel and other accommodations are not exceptional," he admitted. "But if any town has a preeminent claim to next year's conference, it is Mount Pleasant. For there's not another town or city in the state that's more in need of God."

It is not known at this juncture whether or not California will actually gain from a market standpoint from the API meeting. But certainly, there's not another section of the country's oil industry that's more in need of cooperation and improvement.

### Texas Legislature Re-Convenes

The Texas legislature convened in a second special session October 16, with only one subject open for consideration: that of setting up and providing revenue for a state old age pension system. In raising money for the pensions, the law makers will possibly turn to the petroleum industry for new or increased levies.

This session follows on the heels of a first special session of 30 days, in which the chief accomplishment was passage of a chain store tax bill. That measure, which becomes effective January 14, 1936, exempts gasoline filling stations and the business of dealing in oil well supplies.

Also, the Texas house of representatives appropriated $10,000 for continuation of work of the Celaya hot oil investigating committee. The committee must complete its work by April 1, 1936. During its several months' investigation between the regular and first special sessions of the legislature, the committee uncovered various weaknesses in Texas oil proration, some of which already have been corrected.

### Business Gains Expected

The business outlook is generally regarded as promising by corporation officials and economists, who are expecting 1936 to bring important gains over 1934 in sales, production, and profits.

Alfred P. Sloan, Jr., president of General Motors Corporation, whose pronouncements on business and economics carry much weight, at a luncheon meeting in New York recently said, "Every indication points to a very generous increase in business in 1936."

Auguring well in the meantime are figures on the national income, which has been increasing. Higher income means more purchasing power and better business. The nation's income, Secretary of Commerce Roper believes, will be 5 to 10 percent higher in 1935 than in 1934, when it totaled about $50,000,000. Addressing the National Sales Executives Conference at New York last week, the secretary pictured the business situation as presenting the "most encouraging sales pictures which have existed since 1929." A significant circumstance pointed out by the cabinet member was that a larger share of the national income was being paid out to labor—in wages and salaries—in 1934 (67 percent) than in 1929 (65 percent).

INDEXES FAVORABLE. — Power consumption has set new all-time records lately. Railroad traffic has run comparatively high. Steel production has for some time remained steady at relatively high levels. Retail trade has been good. In the first nine months of this year, production of automobiles and trucks was about 15 percent higher than in the similar period of last year.

MORE JOBS NEEDED.—There are, of course, various unfavorable factors in the general business picture. Prominent among them is the continuing large amount of unemployment. The American Federation of labor estimated in its latest monthly business survey that "industrial unemployment still exceeds 11,000,000 and is above last year." It was pointed out in the survey that economists are predicting a gradual upward trend in business during the next six months. "Increasing farm income and further increases in corporation profits are expected," the survey stated.

While predicting further business improvement, the federation in its survey held up a danger signal in these paragraphs:

"This fall's business pick-up indicates a reversion to the predepression type of business expansion, when business men increased production because they saw a chance for good profits, without considering whether a firm foundation of workers' buying power had been built to sustain it.

"Such expansion, when it greatly exceeds buying power, can only end in collapse, even if the downfall is postponed for several years."

### More Control Laws Loom

While business men are still enjoying the much publicized "breathing spell," some of them are beginning to take shorter breaths. The Supreme Court has announced it will pass on validity of two New Deal programs, the TVA and AAA. Congress will convene again in a little over two months. And it will undoubtedly consider some legislation similar to measures passed or contemplated in the past session, when business leaders were in constant dread of new legal restraints.

LABOR WANTS 30-HOUR WEEK.—Among legislation likely to be pressed in the coming Congressional session will be measures aimed at government supervision of working hours and pay for labor. The American Federation of Labor served notice to this effect at its convention at Atlantic City last week, when it voted unanimously to fight for a 30-hour work week throughout American business.

"Nothing will stop us from securing the 30-hour week," shouted William Green, federation president. "We will get it either through the exercise of our economic strength or through legislation."

The federation's committee on the shorter work week reported that the executive council should be directed to bend every effort toward securing enactment of the Black-Connery 30-hour week bill. The committee said the average work week this year has been 38 hours, compared with 37½ hours last year.

# MEN IN THE INDUSTRY'S NEWS

**H. M. HERRON** has been appointed general manager of the export department of The Texas Company, following election to the chairmanship of the board of directors of T. Reiber, formerly vice president in charge of the export and marine departments. Herron was formerly assistant manager of the export department. Other appointments announced by The Texas Company are: W. H. Borie as manager of the South American division; C. M. Claeys, manager of the European division, and A. E. Thayer as assistant manager of the export department. All four men have been with the company for many years.

**W. H. HEGWEIN,** geologist, and R. W. Barker, paleontologist of Cia. Mexicana de Petroleo "El Aguila" S. A.; S. A. Grogan, chief geologist of Mexican Gulf Oil Company, and Wm. A. Baker, chief geologist of Huasteca Petroleum Company, were among the Tampico delegation present at the mid-year meeting of the American Association of Petroleum Geologists and the annual meeting of the San Antonio Geological Society, held in Mexico City October 16 and 17.

**HARVEY W. GILBERT,** president, Gilbert Oil Company, Beaumont, Texas, has returned from a business trip to Montreal, Boston, New York and Washington, D. C.

**ROY H. NEWTON,** superintendent of production for Venezuelan Gulf Oil Corporation at Maracaibo, Venezuela, and Mrs. Newton are house guests of Mr. and Mrs. Tim L. Evans of Houston. The Newtons will vacation in the States until November.

**A. E. HAGBERG,** purchasing agent of the Cia. Mexicana de Petroleo "El Aguila" S. A. is in Mexico City, following a trip to Europe and the United States. He will return to his headquarters in Tampico shortly.

**R. J. ST. GERMAIN,** consulting geologist of Houston, is spending a week in Oklahoma.

**C. W. TACKMAN,** field auditor of Mexican Gulf Oil Company at Tampico, is spending a vacation in Mexico City.

**J. B. O'BRIEN,** general manager of Huasteca Petroleum Company (Standard Oil Company of New Jersey), has returned to Tampico after a trip to New York.

**J. E. SHATFORD** of El Dorado, Arkansas, president of Louisiana-Arkansas Refiners Association, and former national coordinator of refining under the federal oil code, has organized Shatford Trade and Transportation Company at El Dorado, to engage in trading and transportation of petroleum products. He is former president of Ouachita Valley Refining Company.

**D. K. SMITH,** manager of Globe Petroleum Company at Carbona, State of Veracruz, Mexico, spent several days in San Antonio, Texas, recently.

**J. EDGAR PEW,** vice president of Sun Oil Company, and G. A. Renard, executive secretary of the National Association of Purchasing Agents will be the speakers at executives' night of the Purchasing Agents Association of Tulsa, Tuesday, November 5. Pew is to review the standardization movement, now carried on by the American Petroleum Institute, but which got its official start with the association back in 1922.

**WM. E. TAYLOR,** of the drilling department of Cia. Mexicana de Petroleo "El Aguila" S. A. at Poza Rica, State of Veracruz, Mexico, recently was called to Fort Worth on account of the death of his mother.

**THEODORE HOFFACKER,** chairman of the board of directors of Hurricane Petroleum Company, New York City, which owns oil properties in East Texas, visited in Shreveport last week as a guest of Martin J. Grogan, president of this company.

**KENNETH G. HOWARD,** of the engineering department of Mexican Gulf Oil Company, has returned to Tampico after a brief vacation spent in San Antonio, Texas.

**C. C. ZIMMERMAN,** who has charge of geological and geophysical details stationed by The Texas Company at New Iberia, Louisiana, has resumed his duties after undergoing an operation for appendicitis.

**W. G. TSCHUDIN,** general manager of Mexican Sinclair Petroleum Corporation, with headquarters in Mexico City, spent several days in Tampico recently.

**J. H. PRESSLEY,** head of the land department for Sun Oil Company, Dallas, departed last week accompanied by his wife on a vacation trip to the Cumberland Mountains in northern Alabama.

**R. W. HOWE,** vice president and general manager of Atlantic Pipe Line Company, is in a Dallas hospital recovering from injuries sustained recently in an auto mishap while enroute from Dallas to Houston.

**J. J. ABADIE,** for some years past refinery warehouseman of Huasteca Petroleum Company at Tampico, has been placed in charge of the purchasing department, succeeding A. P. Geisendorff, who recently resigned.

**J. T. McCARTHY, JR.,** president of Hercules Supply Company, returned to headquarters at Fort Worth last week after a brief visit to Los Angeles.

**WM. McKEE,** in charge of the refinery accounting department of Huasteca Petroleum Company, has returned to Tampico after a vacation spent in New Orleans.

**CURT HAMILL,** independent operator of the Gulf Coast, recently moved from Houston, his home for many years, to San Antonio, where he will open an office soon.

**B. C. BROOKS,** field superintendent for Sun Oil Company in the Balcones Fault zone and South Texas, has transferred headquarters from Lockhart to Beeville because of the reecnt expansion of the company's operations in the latter area.

**A. J. ARMSTRONG,** secretary of the Association of Producers of Petroleum in Mexico, has returned to his headquarters in Mexico City, after a trip to the United States.

**WILLIAM S. ARTHURS,** chief scout of Skelly Oil Company, and Mrs. Arthurs, are making an extended tour of Kansas, Oklahoma, Texas, New Mexico, Arkansas and Louisiana oil fields.

**R. E. FLANDERS,** president of Jones & Lamson Machine Company, Vermont, Connecticut, and president of American Society of Mechanical Engineers, has been on a tour of the Mid-Continent. Talks were made at Houston, Dallas, Oklahoma City, Norman and Tulsa.

**WAYNE JONES,** of Tide Water Oil Company, at the Houston Geological Society's weekly meeting October 17 was on the program for a report on the ninth annual field conference of the Kansas Geological Society, dealing with the geology of the Upper Mississippi Valley.

**TUCKER ROYALL,** Palestine, Texas, banker and chairman of the Texas Tender Board has resigned from the board effective November 1. Royall has been chairman of the tender organization since its inception in June, 1934. H. V. Hamilton of Palestine, a member of the board during the past several months, has been appointed chairman to succeed Royall, while W. J. Christian of Austin has been selected to fill the vacancy on the board membership created by the resignation of Royall.

**R. W. McDOWELL,** vice president in charge of sales of Mid-Continent Petroleum Corporation, has returned to Tulsa after spending six weeks in London. He reports the English busy "preparing for something quite serious," but with everyone praying that it will not take place.

**J. G. JEROME,** R. E. Carron, J. M. Golden and W. A. Adams, who have been engaged on seismograph work in the State of Veracruz, Mexico, for some months past, for Mexican Sinclair Petroleum Company, have returned to the United States.

**L. D. CAIN,** sales manager for Portable Rig Company, returned to Houston recently from a two weeks trip through the North Texas, Oklahoma and Kansas territory, where his company has recently shipped a number of Portable unitize drilling rigs.

**J. S. GILLESPIE,** president, American Hollow Boring Company, Erie, Pennsylvania, passed away on October 8 at a Cleveland, Ohio, hospital. Mr. Gillespie had been head of American Hollow Boring Company since its organization in 1918.

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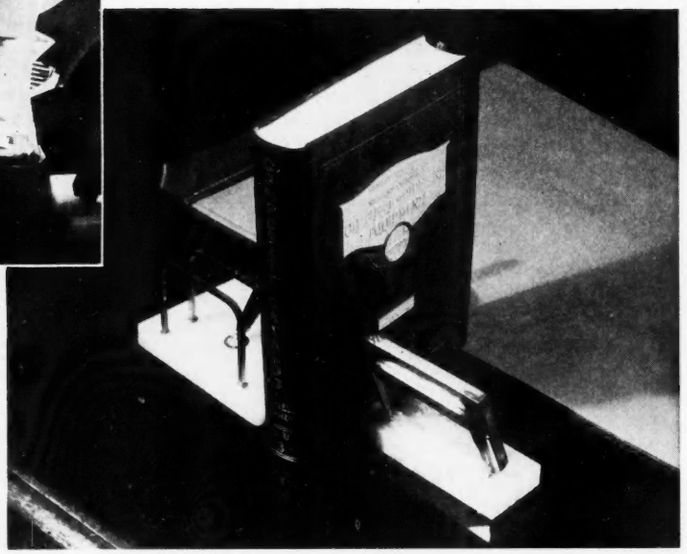

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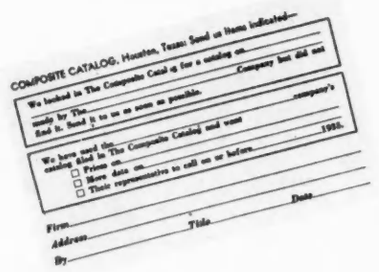
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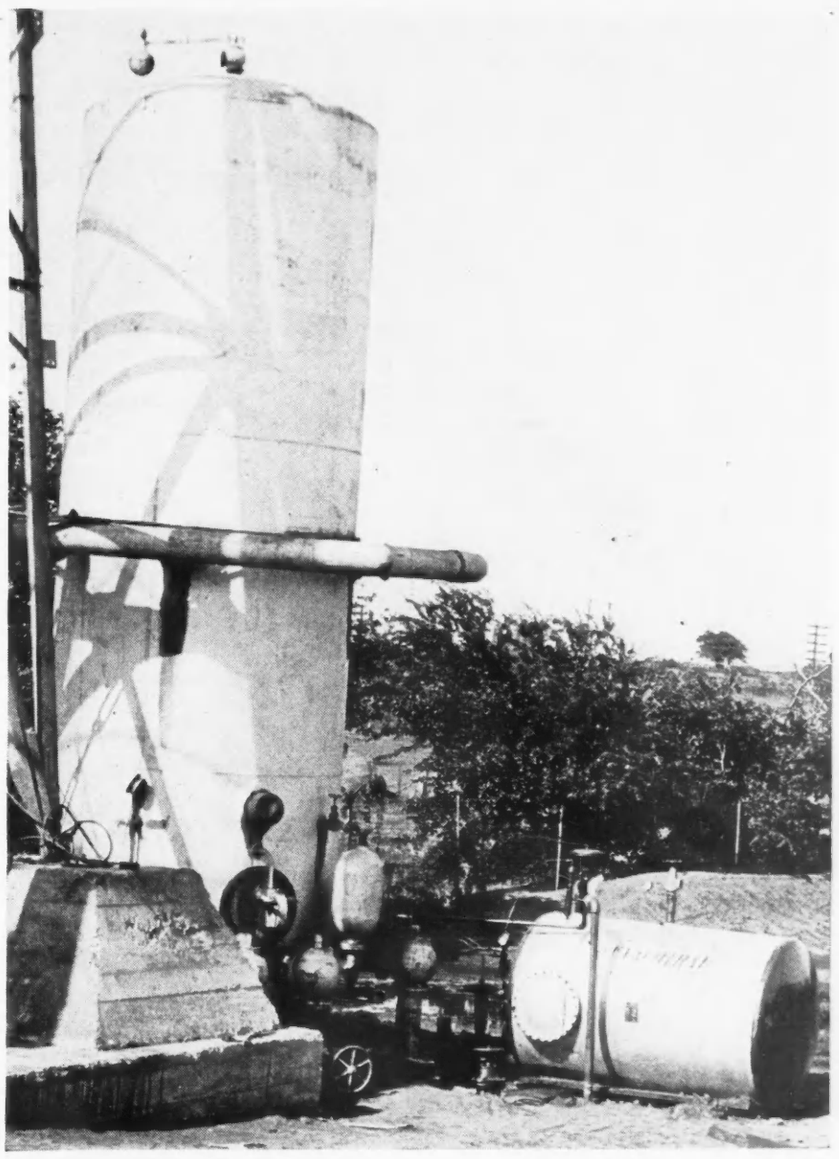
# *Auxiliary Gas Trap*

## AIDS IN ADAPTING HIGH-PRESSURE SEPARATORS TO DECLINED CONDITIONS

By FLOYD SWINDELL, Staff Writer

THE Oklahoma City field apparently had an average initial formation or bottom-hole pressure of approximately 2600 pounds per square inch. Oil wells with gas volumes upwards of 75,000,000 cubic feet were not uncommon. This combination of conditions made necessary the use of heavy high pressure surface equipment of large volumetric capacity and capable of withstanding the cutting action of sand in the flow stream. With the pressure now declined to an average of approximately 400 pounds per square inch, production men are faced with a number of problems, among which is the adaptation of available equipment to present conditions. Where formerly high back pressure could be held the wells now must be produced at as near atmospheric pressure as is possible to obtain maximum efficient lifting or flowing conditions. One of the most recent developments in this respect is the use by American Oil & Refining Company of a horizontal or vertical trap, auxiliary to the large separators installed when high pressures existed and when large volumes of gas had to be handled.

The fluid receiver of this trap comprises either a horizontal or vertical tank with a float installed inside which actuates, through a ball-bearing stuffing box, a snap-acting pilot located on the float bracket or housing. Illustrations show the horizontal type trap. The pilot is arranged so that the float will snap it into one position for a low position of the float such as obtains when the fluid level has reached a low point in the receiver and again snap it into an opposite position when the float has reached a definite point in its upward travel. A special type three-way valve is used in connection with the trap, one such valve, usually in the four-inch size, placed in the line which connects the separator with the fluid receiver and a second placed in the line which acts as an equalizer between the separator and fluid receiver. These valves are diaphragm actuated and spring controlled and constructed with two single seats. With the application of pressure to the diaphragm the spring



**Separator and auxiliary trap installation being used by American Oil & Refining Company at Oklahoma City.**

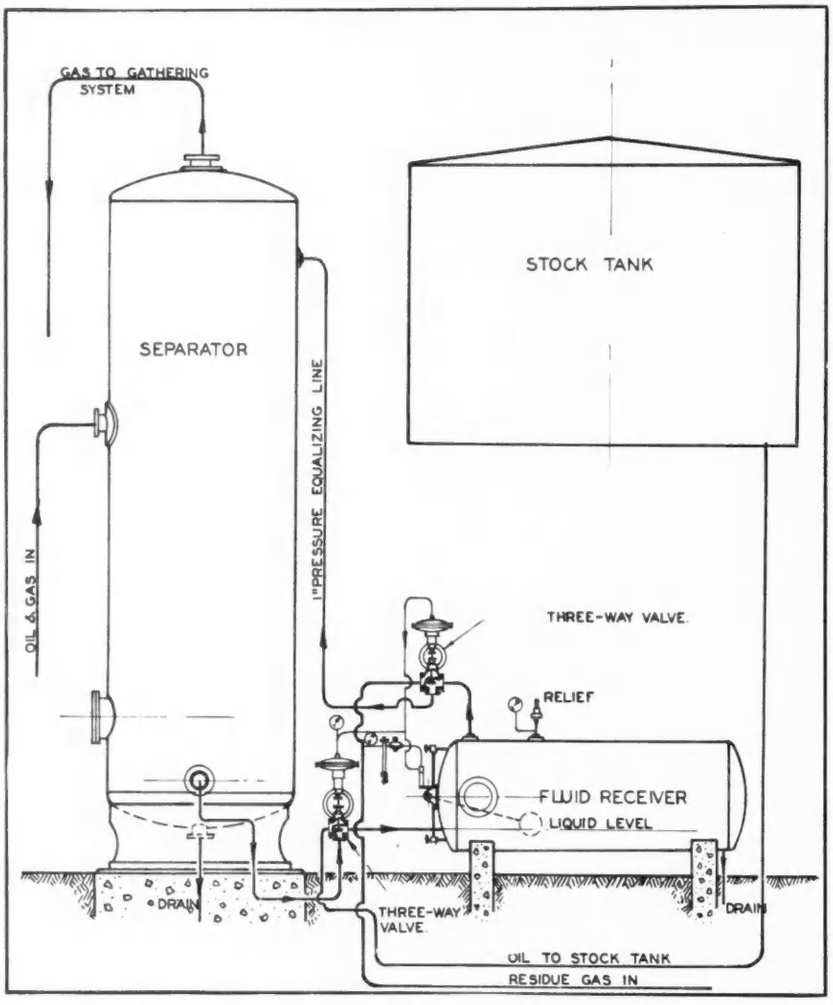
is compressed, the valve stem moves downward and the upper port is opened. The same movement closes the lower port. With the release of this pressure on the diaphragm, the valve stem moves in the opposite direction, closing the upper port and opening the bottom port. A common connection in each instance goes to the trap, the bottom connection in each instance going to the separator. The left-hand horizontal connection goes to the residue pressure supply for the upper three-way valve and to the stock tank connection from the lower three-way valve. The snap-acting pilot mechanism is so arranged that when the float is in a low position there is no pressure on the diaphragm of either of the three-way valves.

Residue gas pressure is taken from some suitable source at pressures varying from 15 to 25 pounds, depending upon the height through which the oil must be lifted to the stock tank. This residue pressure is also used through a filter, auxiliary regulator and to the snap-acting pilot for actuation of the diaphragms of the two three-way valves. During the time when the separator is draining into the fluid receiver, the lower three-way valve has an open connection between the two vessels. Likewise the upper three-way valve has an open connection between the top of the fluid receiver and the equalizing pressure line back to the separator. The upper valve permits the return of gas from the fluid receiver to the separator, such gas being displaced by the fluid which is coming into the receiver. During this period of the cycle the residue gas pressure for blowing the receiver is shut off by the position of the upper three-way valve. At the same time the lower three-way valve is in such a position that the connection between the fluid receiver and the stock tank is closed. Oil is then passing from the separator by gravity alone to the fluid receiver, the system being at atmospheric pressure. It is also possible to operate under vacuum if desired.

When the float has risen to the upper tripping level, the snap-acting pilot trips and applies pressure to the diaphragms of the two three-way valves. These pressures are applied simultaneously and as a result the lower three-way valve closes the connection between the separator and the fluid receiver and at the same time opens the connection between the fluid receiver and the stock tank. Also at the same time the upper three-way valve has closed the equalizing connections which connect with the fluid receiver and at the same time has opened the residue gas pressure so that this pressure is applied on the fluid in the receiver. The pressure thus applied forces the oil from the receiver through the lower three-way valve up to the stock tank. At this time the separator is refilling from the well but is completely shut off from the auxiliary trap so that no back pressure is applied to it.

The trap continues to discharge until the float reaches the lower tripping level, at which time the snap-acting pilot removes the pressure from the diaphragms of the three-way valves. These valves then resume their original positions and the residual gas pressure in the fluid receiver equalizes back and into the separator. When pressures have been equalized between the fluid receiver and the separator gravity flow from the latter to the former again starts through the lower three-way valve. All controls are removed from the separator and no oil valves, float cages or other control mechanism are used. In case the gas is being discharged from the separator to the atmosphere through a riser or vent, the back pressure valve may be propped open or completely removed. This permits a low back pressure to be carried on the separator. As a part of the snap-acting pilot is a counter which records the number of trips or dumps of the fluid receiver. By determining the number of barrels of fluid displaced per dump and multiplying by the number of dumps shown on the counter during any period, a very accurate and definite metering of the fluid can be obtained.

Arrangement of the trap is such that it permits considerable lowering of back pressure on the separator or the carrying of the highest possible vacuum without affecting its operation. Since the system is entirely enclosed, no gas is vented or popped to the atmosphere but is returned to the separator from which it may go to the gathering system. Its use eliminates the necessity for elevating separators.




**Schematic flow chart of the horizontal trap used as auxiliary to previously installed high-pressure separators.**

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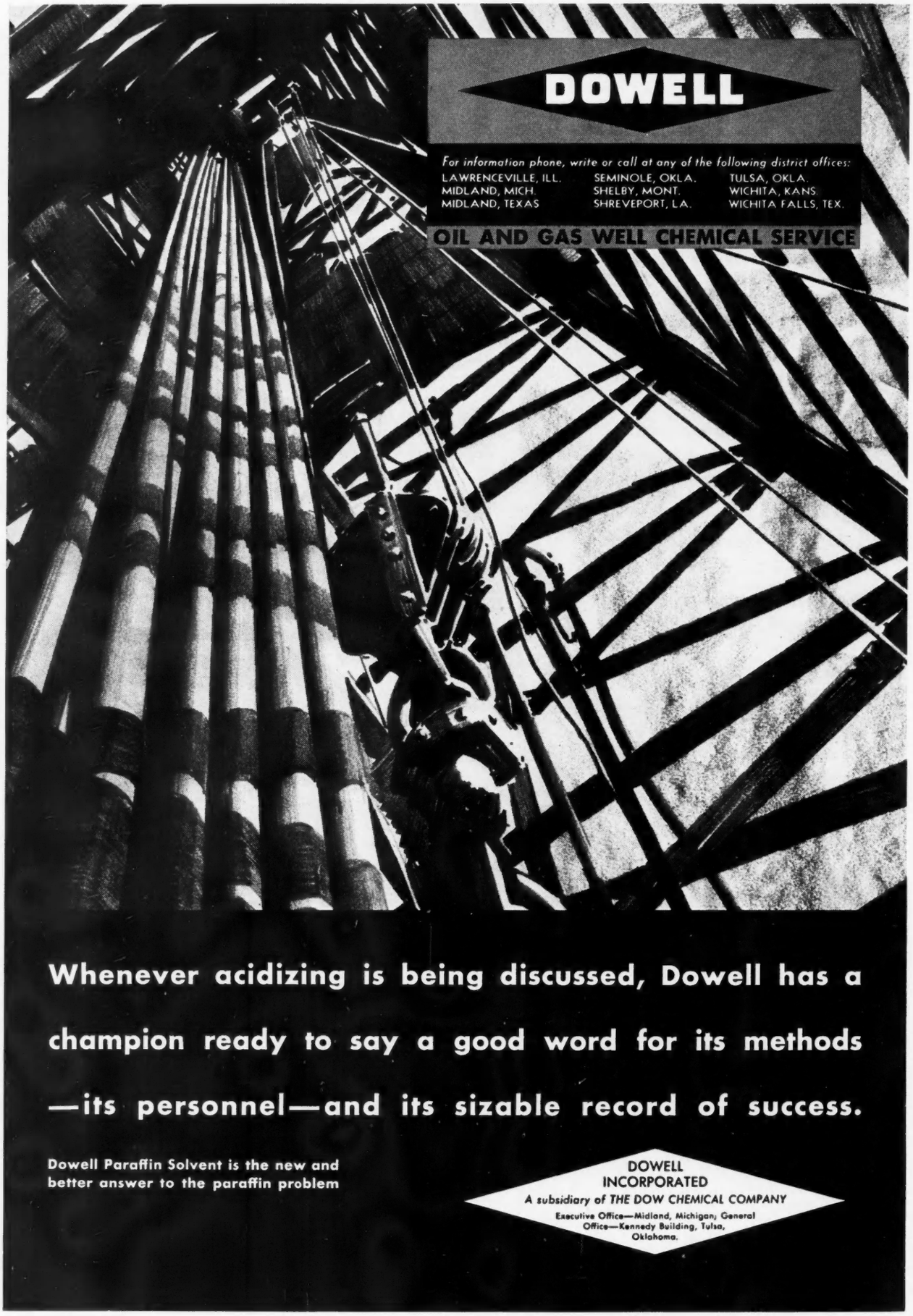
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# *Petroleum Shortage And Its Alleviation*

## IS NOT A PREMATURE CONSIDERATION

By L C. SNIDER, Geologist,
Henry L. Doherty & Company, New York
and
B. T. BROOKS, Chemical Engineer, New York

THE alleviation of a shortage in our domestic production of petroleum is primarily a problem or problems for chemical engineers and also a matter of more efficient utilization.

It is by no means premature to consider the possibility of a petroleum shortage in the United States, to consider what has already been done by chemical engineers and researchers to produce petroleum-like products from other sources, and to consider what changes are likely to occur in the petroleum industry and in the utilization of petroleum products.

There never has been any question but that some time our petroleum supply would approach exhaustion. But long before the extreme condition of *exhaustion* is reached we shall experience a *shortage* of petroleum. The essence of the question is *when* a shortage will be reached. There is abundant evidence that we may expect a shortage of petroleum sufficient to necessitate a marked increase in our imports and an increase in the petroleum price structure within five to eight years. Five to eight years is indeed a short time in which to develop to efficient large scale operation any very new process of major importance.

It is a fact that every estimate of our total possible future production of crude petroleum, in the United States, made by qualified authorities up to the year 1925, has been exceeded by actual production, in addition to which we have a known future reserve of ten to twelve billion barrels. These estimates are shown in Table 1.

The facts have tended to discredit the professional opinions of petroleum geologists and have created an entirely unfounded and unscientific widespread belief that oil would continue to be "found" in abundance in the United States. However, many more facts are known today than when the earlier estimates were made.

The statement of our reserves in terms of years supply, such as 10 or 12 years, is highly misleading as indicating that no concern need be felt until near the end of that period whereas we shall need a new supply of considerable magnitude in about five years, no matter whether our proved reserves are *equivalent* to 10 or 15 years supply. Though we may experience a *shortage* or an inadequate supply in five to eight years, we shall certainly not see *exhaustion* of our oil fields in 50 years. This error, in stating our reserve in terms of years supply, is so common that it is perhaps worth while to point out that the profitably productive life of an oil field may be 50 years, or more, as in the case of Pennsylvania, New York and Ohio. New York attained its peak production in its initial year, 1882, and in 1933 was still yielding about 0.3 percent of our domestic production. The same thing is shown in another way, i.e. less than two percent of the wells produce 50 percent of our oil, the two percent being wells in recently discovered fields.[1]

Though our known reserve may be *equivalent* to 12 years consumption, there is no method now known by which this oil can be brought above ground in 12 years, no matter what its value.

In all probability the first result of an increasing shortage of domestic crude petroleum will be the importation of oil from South America and possibly other

**THE accompanying article, which is a discussion of the possibility of a petroleum shortage in the United States and its probable influence on the industry, is an abstract from a paper presented at the American Chemical Society annual meeting, August 19-24, San Francisco, California. In view of the widespread interest in the future crude oil reserve status of the nation, the article is particularly interesting and enlightening. The authors wish to stress two important points: 1. The difference between *shortage* and *exhaustion*, which the general public cannot apparently understand; 2. No sensational rise in crude prices, in fact no rise due to oil shortage is predicted for several years. However, when shortage does come and higher prices result, this should be very healthy for those companies who have had foresight enough to build up their reserves.**

[1] Petroleum Facts and Figures, published by the Am. Petroleum Inst., New York, Ed. 2, 1929, p. 93.

TABLE 1

| Year | Authority | Estimated Reserve (billion bbls.) | Interim Production (billion bbls.) |
|---|---|---|---|
| 1914 | Ralph Arnold | 5.7 | 13.7 |
| 1915 | U. S. Geological Survey | 7.6 | 13.3 |
| 1918 | David White | 6.7 | 12.5 |
| 1921 | Geologists of A. A. P. G. | 9.15 | 11.3 |
| 1925 | Comm. of Eleven A. P. I.*** | 5.3 | 8.88 |

***An estimate based upon producing and proved acreage. No estimate was made for unproven territory.

fields. Though oil is now produced in some South American fields at a relatively low cost, one need only recall the history of Chilean nitrate to realize that the economic needs, or caprice, of the South American republics may be a factor when we really need oil from this source.

Following a period of increasing petroleum imports and increasingly high price levels for crude and all petroleum products a point will be reached when certain substitutes will *begin* to compete and check the rising price of petroleum. The most promising of such substitutes are shale oil, oil made by high-pressure hydrogenation of coal, and oil made by the reduction of water gas. Each of these processes can produce motor fuel and lubricants in quantities sufficient to meet our present petroleum requirements for many years.

Exports, particularly of manufactured (refined) products, are generally considered a legitimate part of any business. If exports are included in the total demand we find that; the domestic supply of crude petroleum in the United States has been insufficient to meet the total demand for 20 years, with one exception, and the deficiency has been made up by imports. During the last nine years the net deficiency has been more than 500,000,000 barrels. (From statistics compiled by the U. S. Bureau of Mines).

Assuming that exports may be eliminated and considering our domestic requirement only, there is a real and imminent danger that our domestic supply of petroleum will be less than our consumption on a price basis similar to the present one. By imminent is meant a period of about five to eight years.

### Present Producing Areas

According to Wallace Pratt the known reserves of petroleum producible by known methods, are located as follows:

| | | |
|---|---|---|
| Oklahoma | 1,000,000,000 | bbls. |
| California | 3,500,000,000 | " |
| Texas | 3,500,000,000 | " |
| All other | 2,000,000,000 | " |

According to V. R. Garfias and the U. S. Geological Survey our proven petroleum reserves may be as much as 13 billion barrels. A study, recently made by a well known investment company, of the oil reserves held by all important producing companies gives us a total proved reserve of 12 billion barrels. If we are not to deplete our present known reserve, it will require the discovery of about one billion barrels of new oil each year. Over the last four years, our average rate of discovery has been only five hundred and eighty million barrels per year.

It has been pointed out recently by Wallace Pratt[2] that "the rate of discovery curve climbs gradually to a conspicious maximum in the period 1926-1930 and then slumps off sharply to a point lower than it has been for nearly 20 years. The slump following 1930 is a reflection of the failure of finding technique, in spite of all efforts and all improvements, to cope with the task of maintaining the established discovery rate in the face of the ever smaller number and the greater obscurity of the pools remaining to be discovered. Even the recent remarkable progress in deeper drilling has not been sufficient to overcome the difficulty."

[2] Pratt, Wallace; Oil and Gas Journal, Sept. 5, 1935.

Only three states, Arkansas, New Mexico and Montana, have been added to the list of productive states in more than 25 years, and neither the present production nor the proved reserve of these states is important from the national standpoint. The only important producing areas that have been added in the older producing states are the Panhandle (Texas) and the West Texas-southeast New Mexico district.

Notwithstanding the aid of geophysical methods and extensive wildcatting, no market-breaking fields and very few of major importance have been discovered since East Texas in 1930 and Conroe in 1931. (A field of major importance may be considered to be one capable of producing a total of about 75,000,000 barrels of oil, which is about one month's supply for the United States). With the exception of the Yates (Texas) pool no really important shallow field has been found since the A.P.I. Committee of Eleven report was issued in 1925. The withdrawals from our proven reserves have been greater than the amount added by the discovery of new fields for at least five years.

### Imminent Shortage of Production from Present Fields

During the years 1925 to 1933 the excess of domestic production over domestic consumption averaged about 75,000,000 barrels per year. This excess would have been wiped out, in the absence of important new discoveries, by two years normal decline in only one or two of the flush fields, as shown by the following:

1. The combined annual production of the Santa Fe Springs and Long Beach fields declined 82,000,000 barrels in two years, 1929-1931.
2. The Seminole (Oklahoma) district declined 95,000,000 barrels in four years, 1927-1931, in spite of the discovery of new pools in the area.
3. The four principal fields in the West Texas area declined 87,000,000 barrels from their combined peak productions (1926-1930) to 1933.
4. The five principal pools in the east-central Texas district (Mexia, Powell, Richland, Currie and Wortham) declined from a combined peak production of 88,000,000 barrels (1922-1925) to 7,500,000 barrels in 1928, and less than 2,000,000 barrels in 1933.
5. The fields which produced 1,000,000,000 barrels in 1929 produced less than 600 million barrels in 1933.

### Proration and Potentials

Objection may be raised to the significance of the last item above, on account of proration and restricted production. The official "potential" figures, upon which proration is based, have given an entirely false impression of the actual production capability of many fields. "Potentials" are based upon the flow for short periods, from a few minutes to a day or two, of individual wells, or of "key" wells upon which the potentials of larger groups of wells are based.

Restricted fields similar to Hobbs, Yates and Van, in which drilling has been controlled, promise to give a dependable back log of production at somewhere near their "critical" rate for several years to come. Although many of the more recently developed fields could have produced for short periods at rates greatly in excess of the rates attained, they would probably have been quickly depleted or ruined

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by such unrestricted production. A general study of field histories shows that the slower drilling and slower development and the natural conditions of the older fields were as efficient in restricting their rate of production as artificial restrictions are in most of the recent rapidly drilled fields.

### Present Situation In Principal Producing Areas

Since the report of the A.P.I. Committee of Eleven was published in 1925, much of the territory listed as probably productive has been condemned by drilling. The old producing areas in Kansas have now been drilled to the bottom of the sedimentary rock column. The large number of dry holes drilled in this area, 2334 in Marion, Butler, Greenwood, and Cowly Counties condemns this area so far as important new pools are concerned.

The eastern and southern half of Oklahoma is similarly condemned for important new fields. Creek County with over 2000 dry holes and Okmulgee and Osage Counties, with more than 3000 dry holes each, show the extent to which these areas have been tested.

The area now being actively exploited in Kansas and Oklahoma is a strip extending generally northward from the Arbuckle Mountains. Practically all new fields in Oklahoma and most of those in Kansas are producing from the deepest possible productive horizons (Ordovician). This entire area has been thoroughly worked by surface and sub-surface geological methods, closely core drilled, completely worked over with magnetometers and the Oklahoma portion completely and the Kansas area largely explored with the seismograph. At the rate at which the structures thus found are being tested it is safe to say that any pool of even moderate importance now remaining in this area will be discovered within the next year or two.

In Texas the broad central belt with the San Antonio and Mexia-Powell districts on the eastern, and the Ranger-Breckenridge and Wichita Falls districts on its western margin, is now condemned by deep drilling for important new pools. The area of the Caddo or Sabine uplift, with a few small pools in Louisiana on its crest and the East Texas field on its western margin can be said to be condemned for important new production, down to the Trinity beds in which there is some, though not a great chance, for production important from a national standpoint.

It is impossible within the limits of this paper to discuss all the producing or potentially producing areas in detail. Three areas in Texas are being actively exploited, the Panhandle, West Texas and northeastern Gulf Coast districts. The Panhandle district is well worked out within the present outline of the area but deep drilling on the flanks of the uplifts may discover something of importance. Small pools are still being found along the northern margin of the West Texas area. The district was discovered in 1923 and all the more important fields were discovered by the end of 1927. Deeper drilling, into the Ordovician, has been very disappointing yielding less than 20,000,000 barrels deep production in the Big Lake field up to the end of 1933. The Gulf Coast belt of Texas and Louisiana was thoroughly worked over for shallow production during its early history. Of the 81 separately listed fields only six have so far approached or exceeded 75 million barrels and the whole area has produced little more than a year's supply for the United States. Conroe, discovered in 1931, is the only recent field of major importance in this area. Since the discovery of Conroe, more than 300 wildcat wells drilled in this area have yielded only 12 new prospects or pools, none of which as yet promise to be as important as the better older fields.

The outlines of the probably productive areas in California are drawn today practically as they were 20 years ago. Ventura Avenue in 1925 and Kettleman Hills in 1929 are the only contributions from this state in recent years which now appear to be of great importance.

Deeper drilling has given practically no results in the old Appalachian area, where wells have been drilled to a depth 4000 feet below the deepest known production.

The production of Michigan to the end of 1933 was 27½ million barrels, or the equivalent of about 10 days domestic consumption. The production in 1934 was less than one percent of the United States total.

Of the Rocky Mountain states, Wyoming is by far the most important, having produced, since 1889, 2.2 percent of the United States total production, or 4½ months supply. In the entire area of the Rocky Mountain states years of exploration and the drilling of more than 2500 dry holes, which have tested most of the known structures, have revealed only two important fields, Salt Creek and Hobbs.

In an earlier optimistic estimate of possibly productive territory the states of New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Missouri, Wisconsin, Idaho and Nevada were included in whole or in part. These now deserve little or no consideration as possible contributors of any importance to our future petroleum supply.

The possibly more promising areas, from the standpoint of their geology, are the northern plains states, North Dakota, South Dakota, Nebraska and Iowa, and the eastern Gulf Coast states, Mississippi, Alabama and Florida.

### Increasing Percentage of Dry Holes

One indication of the approaching exhaustion of the possibility of discovering important new fields is the increasing percentage of dry holes drilled. Although our geological knowledge is much more accurate and extensive, and many more geologists are employed in finding oil than in earlier years, the proportion of dry holes drilled has increased. In Texas this percentage fluctuated moderately below 30 percent to 1917, descended to 17 percent in 1919 and then rose steadily to 45 percent in 1930. In Oklahoma the dry hole percentage ranged between seven and 20 from 1904 to 1917, between 20 and 30 from 1918 to 1924 and between 30 and 35 from 1924 to 1933. In California the percentage of dry holes varied from three to 12 percent from 1905 to 1922; then from 21 to 26 percent from 1923 to 1930; was 49 in 1931; 48 in 1932 and 40 in 1933.

### Proven and Unproven Reserves

Current estimates of proven reserves vary from about 10 billion to 15 billion barrels. This may seem to be a wide variation; but the difference is caused principally by different interpretation of what is proven territory. Some of the more liberal estimates evidently include some acreage of doubtful character. In addition to the proven reserve an unknown amount of oil lies in undiscovered fields. The facts presented above indicate in a very qualitative way

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what the chances for discovering new producing areas, or important new fields in old producing areas, are. In view of the facts, there is no assurance that the proven and unproven reserves are large enough, or that new discoveries will provide production fast enough to maintain the present position of our petroleum industry. The available evidence indicates that we will be fortunate if we can supply our own consumption at its present rate for any period longer than five years, and a shortage may develop sooner should the consumption increase. It may be repeated that we have not supplied our total demand, including exports, for many years; but have used several hundred million barrels of imported oil.

### Increased Oil Recovery

The estimates of total oil recovery already given include that to be produced by such auxiliary methods of production as repressuring, and water flooding, where they have been shown to be practicable. Water drive is applicable to but very few fields. Even though this method is particularly favored by the conditions in the Bradford, Pennsylvania, field, and Bradford oil commands the highest price paid for oil in the United States, the effect of water flooding has only moderately increased the petroleum production from Pennsylvania, which is only a thin trickle so far as our total demand is concerned. The American Petroleum Institute report on supply and demand[3] comments that "Flooding is expensive and cannot be done on low priced oil."

Water flooding was authorized in Pennsylvania in 1920 and the effect of this operation on this state's production was noticeable by 1925-1926. If we credit all the increase to water flooding this operation has raised Pennsylvania's production from 0.82 percent in 1920 to 2.1 percent of our present production in 1934.

Repressuring by gas, for secondary recovery, is also limited to sands of the general type of the Bradford and no attempt has been made to apply it to deep, unconsolidated, variable, water-logged sands. It was first used in Ohio about 1912 but Ohio's production has declined steadily from nine million barrels in that year to about four million in 1934.

Mining for draining or removal of old oil sand has had little attention in the United States. Driving tunnels in or below the sands, the method practiced at Pechelbronn, Alsace, is practically unthinkable in the unconsolidated sediments of the Gulf Coast and California. Gas given off by the oil would be a very serious if not insuperable obstacle in many fields, and enormous quantities of water would have to be handled. Actual mining of the sand has been suggested. Using data given by the A.P.I. Committee of Eleven, the average number of tons of sand required to recover a barrel of oil ranges upward from 3.2 tons in Montana. Kansas would require 13 tons; Oklahoma, 15 tons; California, 10 tons; Texas, 41 tons; Pennsylvania, 48 tons; Illinois, 38 tons, etc. These figures are not accurate but they show plainly that only exceptionally rich sands under exceptionally favorable conditions can be mined for their oil content at any remotely possible prices.

### Substitutes for Petroleum

Shale has for long been regarded as guaranteeing a plentiful supply of oil in the future, or as supplementing our petroleum supply, and so it may—*at a price.* The price ranges of petroleum in the United States have not been high enough to inspire any attempt to retort oil shale on a large commercial scale. This very fact makes it impossible to say at what price level, for crude petroleum, shale oil can begin to compete. Perhaps $2.50 per barrel for average Mid-Continent crude at the well may be such a price level. For the great oil shale deposits of Colorado, Utah and Wyoming the estimates of the costs of mining vary from a low figure of 40 cents a ton for open cut methods to as high as $2.50 a ton for selective mining. According to the Bureau of Mines the estimated average yield for a thickness of 500 feet in the famous Green River formation of Colorado is about 15 gallons per ton, selected sections running much higher.

In the second report (1928) of the Federal Oil Conservation Board it is stated that "an oil-shale industry in the United States, to be successful, would need to be operated on an extremely large scale, possibly on a larger scale than any mining operations" and that "the small shale operator would doubtless find it practically impossible to compete with the lower costs of mining and retorting that would be realized only be large scale operations." This fact together with the close chemical resemblance of shale oil and petroleum and the existing equipment for the transportation and refining of petroleum and distribution of its products, now possessed by the larger petroleum refining companies, makes it altogether probable that when we are ready for shale oil the petroleum refiners will produce and refine it.

The fact that a small shale oil industry exists in Scotland is no indication that such an industry could now successfully be established here. The shale oil industry of Scotland has survived from a period when the average yield of oil was 33 to 36 gallons per ton, when the cost of labor was much lower, the price of petroleum was much higher than in recent years, and the shale oil mined much nearer the surface than now. It now costs five to six shillings per ton to mine the shale and with the best Scotch economy the crude shale oil costs 4.5 pence per gallon (British) or about $3.02 per barrel. Furthermore the gasoline from this source is exempt from a tax of eight pence per British gallon or 12.8 cents per U. S. gallon, which tax is paid by imported gasoline or gasoline made from imported petroleum. The shale oil manufacturers also enjoy a tax recently imposed, on Diesel oil from foreign sources.

It is well understood that the retorting of coal cannot produce sufficient motor fuel to be a factor in the situation. If the entire tonnage of bituminous and lignite coal mined in the United States last year had been retorted, the amount of motor fuel (crude benzol) produced would have been only about 2½ percent of our motor fuel requirement.

It has been suggested that our future motor fuel requirement could be produced by pressure cracking of the tar made by low-temperature carbonization of coal. It is possible that up to a certain point such a process might be a factor in alleviating a shortage of motor fuel, but it should be pointed out that several attempts to carry out the low temperature distillation of coal in the United States have been industrial failures. Perhaps as in the case of coal hydrogenation, shale oil and water gas reduction, a much higher price for motor fuel may bring such an industrial development into being, but so many other factors are involved wihch cannot now be evaluated such as the value and utility of the coke produced,

[3] American Petroleum Supply and Demand. New York, 1925, p. 105.

**TABLE 2**

**Principal Products from Crude Oil**

| YEAR | Gasoline and Naphtha Percent | Kerosene Percent | Gas Oil and Fuel Oil Percent | Lubricants Percent |
|---|---|---|---|---|
| 1914 | 18.2 | 24.1 | 46.5 | 6.6 |
| 1918 | 25.3 | 13.3 | 53.5 | 6.2 |
| 1920 | 26.1 | 12.7 | 48.6 | 5.7 |
| 1922 | 28.8 | 11.0 | 50.9 | 4.7 |
| 1924 | 31.2 | 9.3 | 49.8 | 4.3 |
| 1926 | 34.9 | 7.9 | 46.9 | 4.1 |
| 1928 | 37.4 | 6.6 | 46.7 | 3.8 |
| 1930 | 42.0 | 5.3 | 40.2 | 3.7 |
| 1932 | 44.7 | 5.3 | 35.9 | 2.7 |
| 1934 | 47.4 | 6.0 | 37.5 | 2.8 |

that the future role of such a process seems to be highly speculative.

On the other hand the trend of large scale developments in England and Germany is toward hydrogenation of coal. In the latter country coal hydrogenation yields about 80 gallons per short ton of coal. By 1936 it is reported that the German plants will be hydrogenating 2.5 million tons of coal annually, producing about 200 million gallons of gasoline in this way. In England a coal hydrogenation plant has been erected which is reported to have an annual capacity of about 55 million U. S. gallons of gasoline when operating on coal and tar, or about 70 million gallons when hydrogenating tar.

It should be particularly pointed out that in England gasoline made by hydrogenation of coal is exempt from the tax equivalent to 12.8 cents per U. S. gallon and in Germany the process is favored by a similar tax exemption of 220 marks per ton or about 24 cents per U. S. gallon. It cannot be assumed in either case that the tax differential is a measure of the difference in cost between gasoline from petroleum and from coal, since in both countries these plants are considered to be a step in the national security programs of these countries and to be maintained and developed by the indirect subsidy.

In the United States the next step in the direction of greater gasoline yields may be the combination of hydrogenation with pressure cracking, as suggested by Russell, Gore and Voorhees[4]. The average gasoline yield by cracking alone is about 60 percent, and by complete hydrogenation about 108 percent. The latter is an increase of about 80 percent over that by pressure cracking alone. The hydrogenation of a portion of the recycle stock as suggested by Russell, Gore and Voorhees provides an optional flexibility as to gasoline yields.

It will be noted in both distillation of shale and the hydrogenation of coal several years must elapse to build them up to any magnitude. In the event of a national emergency such as war, the emergency would be settled one way or another long before any large part of our gasoline demand could be supplied from the auxiliary sources.

Another possible source of motor fuel, lubricants and wax is a modification of the synthetic methanol process. In this process, upon which work was started by the Badische Company by F. Fischer and Patart in 1913-1914, water gas is reduced by excess hydrogen to light hydrocarbon oils. According to data recently published by Fischer,[5] 1000 cubic feet of water gas will yield about 1.1 gallons of light hydrocarbon condensate, part of which is suitable for motor fuel. The yields are lower than in the case of synthetic methanol and the costs per gallon higher.

The lubricating oils made by Fischer are made by polymerizing the unsaturated hydrocarbons in the lighter fractions, or by chlorinating and treating with metallic aluminum. These oils have the characteristics of lubricating oils of the paraffinic or Pennsylvania type. However, it should be pointed out that the lubricating oil now manufactured in the United States represents less than three percent of the crude and that much more could be manufactured from our present crude supply if it were needed. Lubricating oil has also been manufactured by the polymerization of crack paraffin wax and other olefins, and by the hydrogenation of heavy oil residues. We could therefore manufacture an adequate supply of lubricants from a much diminished crude supply.

### Probable Effects of a Petroleum Shortage

Shortage or surplus depends upon the rate at which petroleum can be produced, and not on the total amount in reserve, nor on the substitutes which may be available in the course of time, at some higher price level. Substitutes, such as shale oil, hydrogenated coal, increased efficiency in utilization and imports, will effect the stringency of a shortage, but will not prevent one.

Dependence upon imports for a substantial part of our petroleum requirement would, in the event of war, make the nation dependent upon the navy to protect these imports, the failure of which would cause a serious dislocation of industry.

Under the conditions of an oil shortage, refineries with little or no production of their own, will operate if at all, under an increasingly serious handicap.

Relatively abundant foreign supplies of petroleum with a shortage of our own supply will tend to raise our prices for petroleum products in relation to prices in other countries and finally bring our prices up to or above theirs. High price levels will certainly cause a shift in the proportions of the principal refinery products, the products of lower value becoming more and more restricted with advancing prices. The trend in recent years with respect to the major products is given in Table II.

If the cost of gasoline becomes high enough to consider any of the substitutes already mentioned, the use of small, low-powered automobiles may be favored which would reduce the gasoline requirement and would have far reaching effects on the automobile and allied industries. The effect of relatively high motor fuel costs, plus high taxes, in favoring low-powered cars has already occurred in Europe to a conspicuous degree, gasoline now retailing at 86 cents per gallon in Italy and 56 cents per gallon in Germany.

The use of Diesel oil in motor cars is evidently possible. If such fuel in suitable engines meets the popular favor, Diesel oil will supplement but can never displace gasoline as a motor fuel. Diesel oil now carries a motor fuel tax in England. Such a development would greatly diminish the need for cracking processes to convert gas oil, or Diesel oil to gasoline. In so far as greater car mileage may be realized from Diesel oil and taking into account the formation of coke, fuel oil residues and gas formed in converting heavier oils to gasoline by cracking, the utilization of oil in Diesel engines would aid materially in alleviating the effects of a domestic oil shortage.

[4] J. Inst. Petr. Techn. 21, 352 (1935).
[5] Brennstoff Chemie, 16, 1, (1935).

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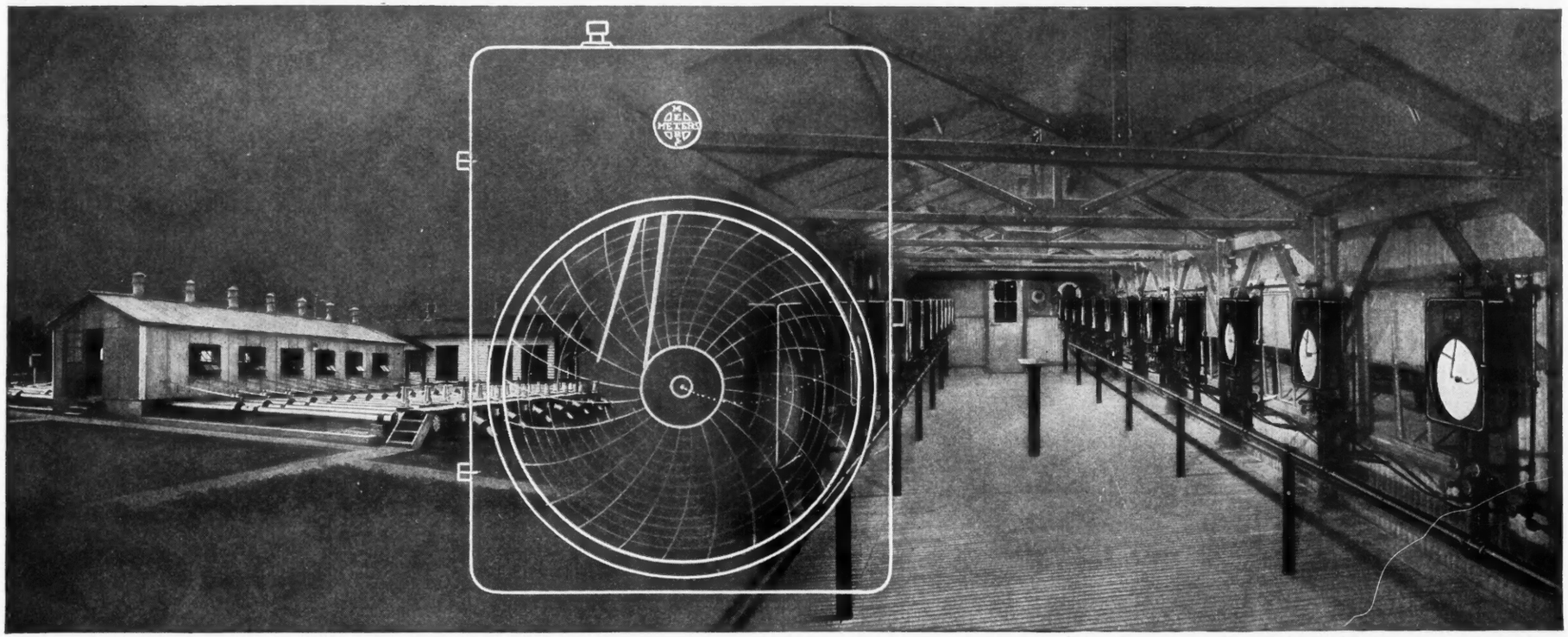

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# Pump Lubrication

## SAVING EFFECTED BY INSTALLATION OF A FEW SIMPLE CHANGES

By ELTON STERRETT

EVEN though in the business of manufacturing lubricants, the refinery and its feeder, the pipe line, tighten down and keep as close a check of lubricating oil used as do any other well managed businesses.

So, when word went through one major company's system that too much oil was being used, the chief engineer of one main line pumping station did more than issue the usual routine "use less oil" order, which results in the oilers skimping the bearings for a few days, only to return gradually to former slackness.

Bearing by bearing, and unit by unit, the station was canvassed for possible economies, the lubrication arrangement of the gear-driven pump crossheads, as the only spot where sliding instead of rotating friction was encountered, being especially studied.

The crosshead babbitt-faced bearing shoes were 14 inches in length, for a stroke of 24 inches. As is the usual practice on such pumps, the sight-feed lubricator for this bearing was mounted above the upper shoe, at the center of crosshead travel. Inspection of the units showed oil spattering over the pump casting to both sides of the lower slide, and trickling down the connecting rod to disappear into the darkness under the crank shield. Occasionally oil drops, falling when the crosshead was clear back, would even land on the extreme rear end of the pump plunger.

After having this oil loss pointed out to them, it was the unanimous opinion of the men in the station crew that, with a 14-inch shoe and a 24-inch stroke, there was 10 inches in each stroke, or 20 inches of crosshead travel out of each pump cycle, in which the oil, fed slowly past the needle valve of the lubricator, could miss the shoe and be wasted. Continuing to reason from this, they computed the percentage of oil intercepted, and therefore used, at 58, the loss at 42 percent.

If, however, the pump drive from the crank pin through the rod and to the crosshead, be drawn to scale and the various positions of the crank pin plotted with the crosshead at each end and at the points where the leading or trailing edge of the shoe, depending upon the direction of travel, first fails to cover the oil hole, an entirely different—and incidentally, correct—set of figures is obtained.

From the sketch, Figure I, showing a typical pump with a 14-inch crosshead shoe, a five-foot connecting rod, and a 24-inch stroke, if the crank be rotated clockwise, it is evident that the pin must travel from the forward dead center "F" to point "D" before the leading edge of the crosshead can cover the oil duct.

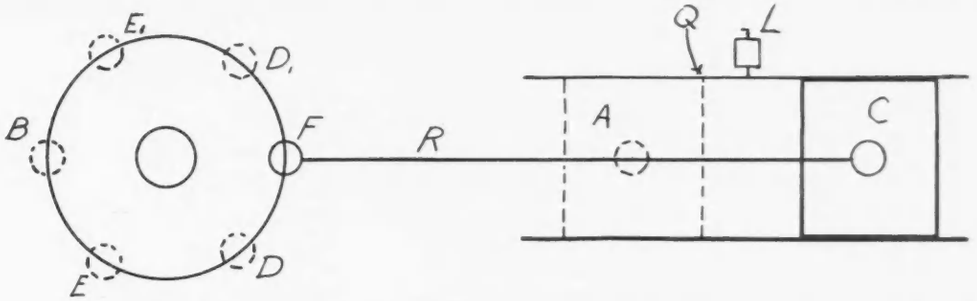



**FIGURE 1**

**C—Crosshead.**
**R—Connecting rod.**
**F, D, E, B, $E_1$ and $D_1$—Crank pin circle.**
**Q—Optimum point for lubricator setting.**
**L—Lubricator setting as originally.**

On the sketch, the arc thus travelled by the crank pin measures approximately 51 degrees.

Continuing the revolution, while the crosshead is passing the oil hole, the crank advances to point "E," measuring approximately 70 degrees past "D." From "E" on to the back dead center, where heavy dashed lines indicate the crosshead position, the trailing edge of the shoe is travelling even further from the oil hole, being five inches distant at the extreme end of the stroke.

Expressing this travel from the sketch of Figure I:

| | | | | |
|---|---|---|---|---|
| Losing angle | F — D | 51 Deg. | | Oil wasted |
| Useful angle | D — E | | 70 Deg. | Oil intercepted |
| Losing angle | E — B | 59 Deg. | | Oil wasted |
| Losing angle | B — $E_1$ | 59 Deg. | | Oil wasted |
| Useful angle | $E_1$ — $D_1$ | | 70 Deg. | Oil intercepted |
| Losing angle | $D_1$ — F | 51 Deg. | | Oil wasted |
| Losing angles each rev. | | 220 Deg. | | |
| Useful angles each rev. | | | 140 Deg. | |

When thus listed and summed up, it becomes plainly apparent that, instead of intercepting the falling oil drops 58 percent of the time, the crosshead shoe is on the spot only 39 percent of each revolution; or, in other words, this method of lubrication

insures the waste of 61 percent of the oil fed through that particular lubricator.

As the crosshead bearing required a filling of the half-pint lubricator once for each six-hour shift, each shoe required one quart of oil per 24-hour day, or half a gallon per pump. There being six units in the station, daily consumption of oil for this one class of bearing amounted to three gallons, or 90 gallons per month, of which 54.9 gallons—being 61 percent of the total—was waste. A complete loss so far as any lubricating service was concerned.

Having thus come upon a startlingly large oil waste, the next step was to correct conditions so as to save this fifty-odd gallons of oil thrown away each month.

By referring to Figure I, it appears that simply by moving the location of the lubricator from "L" five inches toward the crank to the point "Q," at the edge of the crosshead shoe when at back center, the percentage of effective oil interception would be increased by the arcs E-B and B-$E_1$, or 118 degrees out of each revolution added to the 140 degrees originally utilized. This minor change in pump design immediately brings up the percentage of entire operating time the crosshead shoe is in position to receive lubrication from 39 to 72 percent.

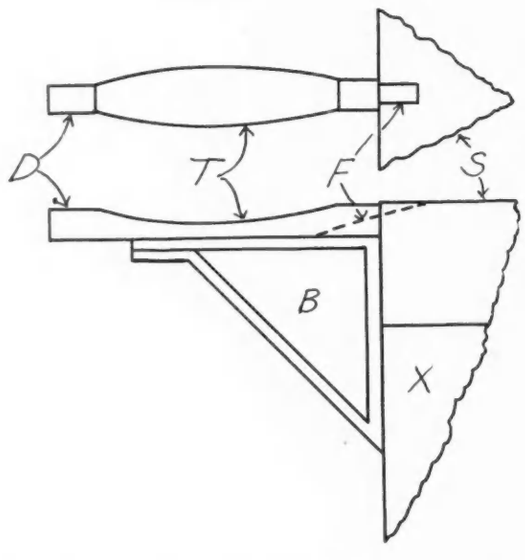
With a view to saving the 25 gallons of oil that would still be dropping to miss their target even were the lubricator shifted to point "Q," the gadget sketched in Figure 2 was developed, and installed experimentally on one pump.

A six-inch length of ⅜-inch copper tubing, shown by "T" in the sketch, was flattened along its upper face, and the flattened section cut out to leave a shallow, canoe-shaped vessel, open at both ends.

The end "D" was then sealed, and an incline built up with solder within the other end at "F." With a file, this incline "F" was continued from the tube position into the babbitt of the shoe "S." With the vessel "T" held in place with a suitable bracket as at "B," the tube was fastened oil-tight so as to project out from the crosshead shoe in the direction of travel and far enough so that the oil dropping from the lubricator even at the extreme end of travel would be caught in the shallow scoop.

**FIGURE 2**

**T—Oil intercepting tube.**
**D—Closed end of tube.**
**F—Oil feed incline.**
**S—Portion of shoe.**
**X—Portion of crosshead.**
**B—Supporting bracket.**




At one reversal of crosshead travel the oil caught in the bit of opened tube is impelled, by its own inertia, into the sealed end "D," banking up there without loss and gradually redistributing itself over the bottom during the crosshead travel. At the next reversal this oil, again under the effect of inertia, banks in the other end of the tube, is forced up the incline "F" and through the opening into the sloping slot in the crosshead shoe, there being further aided in uniform distribution over the wearing surfaces by capillary attraction of the confined space.

With one of these "oil-saver" devices at each end of the crosshead shoe the one at the forward end, in regard to motion just being set up, is the one which tends to spread its lubricant. This placing of oil comes just when it is most required, as even in a comparatively slowly turning pump there is a tendency of the rod to whip with each reversal or direction; and it is this tendency toward whip that imposes the greatest momentary unit pressure between shoe and upper slide.

Having installed two pair of these home-made oil savers on the trial pump, it was gratifying to note that an immediate oil saving was effected. Not only was the engineer able to cut down the oil fed to the crosshead shoes by the saving indicated from a study of Figure I; but an additional economy in oil feed was experimentally determined to be permissible, due to bettered lubrication obtained through having the oil flushed into the space between shoe and slide at the beginning of the stroke, with the remainder of the stroke to insure its even distribution.

After all six pumping units had been similarly equipped, a separate crosshead oil supply was maintained, and extended operation showed an average monthly consumption of only 24 gallons for lubricating all crosshead shoes, as against the 90 customarily expended before development of the oil-saver.

Determination of the degrees of arc included in the effective and wastage sections of the crank pin circle as used in the computations cited was made graphically, by drawing the crank throw and rod to scale and then measuring the angles concerned with a protractor. These angles are, of course, capable of being computed mathematically, but in the case of the station in which they were put to such good use, it required the graphic method to convince some of the station crew that their plan for figuring oil-interception effectiveness from crosshead travel failed to take into account varying rates of speed at which the crosshead travelled. If the values be worked out geometrically, it will be found that the error introduced through the graphic method is at most but one or two percent.

By making the oil-saver tubes and brackets from copper, any danger of marring or ruining an upper slide through one of the devices becoming accidentally bent or jammed is avoided, and the weight kept down so that a very light bracket may be used.

**THIS paper is a discussion of the problem of estimating petroleum reserves in flush prorated limestone fields, which is exceedingly complex because of the peculiar character of limestone reservoirs. It was presented October 10, 1935, at the Houston Meeting of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers under the title of "Estimation of Petroleum Reserves in Prorated Limestone Fields."**

# *Estimation of Reserves*

## IN PRORATED LIMESTONE FIELDS

By P. P. GREGORY, Chief Petroleum Engineer,
Yates Pool Advisory Committee

ESTIMATION of petroleum reserves in prorated sand fields has been discussed by S. A. Judson, H. D. Easton, Jr., and W. A. Schaeffer, Jr., in a paper that appears in Vol. 114 (1935), of the A.I.M.E. TRANSACTIONS. The purpose of this present paper is to extend the investigation to prorated flush limestone fields and to outline a method of procedure in determining the amount of oil originally in place and the amount of oil that can be recovered from such fields. Although it is possible to use the decline curves to estimate the amount of recoverable oil in certain limestone fields that are allowed to produce the oil at or near capacity production, such a method cannot be used in fields under severely restricted production rates. The problem is exceedingly complex due to fluctuation in the allowable rates of oil production over a wide range and at frequent intervals, and especially because of the heterogeneous nature of the reservoir itself. A well completed in a large solution cavity, capable of producing great quantities of oil per day, may be offset by a well of very limited capacity. Also, it is difficult to arrive at an average figure for porosity in a given limestone reservoir due to abrupt variations in the character of limestone, in many instances even between two adjoining wells. It is a safe statement that uniformity of porosity and permeability in limestone reservoirs is nonexistent. It is evident, therefore, that the method of estimation of reserves on the basis of per-acre content can give only approximate results.

In the estimation of reserves the best method of attack apparently lies in the analysis of the physical reactions of the reservoir to the withdrawal of fluids contained therein. For example, it is generally observed that when oil and gas are withdrawn from the reservoir, the reservoir pressure declines, this decline being accelerated when the oil production is being accompanied by high gas-oil ratios. It is essential, therefore, to have accurate and complete data on all the factors that may have bearing on the problem. It is important to secure these data at the earliest stage of development of the field, together with all the available geological information.

In this paper, the discussion of methods of determination of petroleum reserves will be limited to hypothetical limestone reservoirs. Conditions assumed, however, will not differ materially from those existing in a field under actual operation.

For the purpose of this discussion, one or more pay zones constituting a limestone reservoir are continuous and arched into a closed structure, forming a single reservoir. The porosity and permeability of the layers are arranged so that the same average reservoir pressure exists in different parts of the field at a common datum of reference. For expediency, limestone reservoirs will arbitrarily be divided into two general groups:

(1) Fields under volumetric control.
(2) Fields under active hydraulic control.

The reason for such grouping is that the effect of withdrawal of fluids from the two types of reservoirs on the reservoir pressure is quite dissimilar. In a field under effective hydraulic control, little or no decline in pressure may be produced by the withdrawal of quantities of oil and gas from the field, by virtue of replacement of such fluids by water coming from an inexhaustible source connected with the field. In fields of the first classification, a measurable pressure diminution will be caused by the production of oil and gas.

### Methods for Solving the Problem

*Fields Under Volumetric Control*: In fields devoid of active water drive, the amount of oil in place, as well as the recoverable oil, may be determined by the use of the method developed by Coleman, Wilde, and Moore, described in Vol. 86 (1935) of the Transactions. This method is applicable to fields in which the solubility

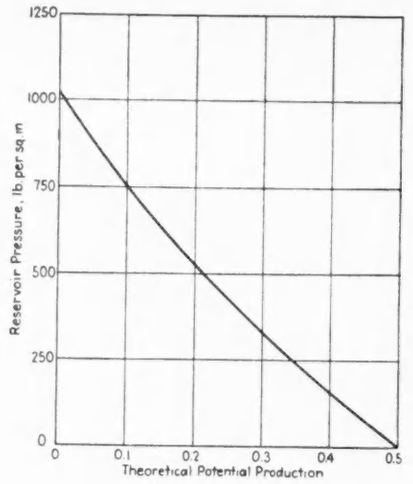



**FIGURE 1**

**Relationship between reservoir pressure and theoretical potential production.**

of the gas in the oil follows Henry's law and where conditions are favorable to maintenance of constant gas-oil ratios. The method will be reviewed here by considering a field under the following assumed conditions:

Initial resorvoir pressure, $P$, = 70 atmospheres.

Gas in solution in the oil at $P$, = 46 cubic feet per cubic foot, or $k = 0.657$ cubic feet of dissolved gas per atmosphere.

Unit volume of gas-free oil saturated with gas at $P$ occupies 1.1 units in reservoir, or $a = 0.00218$.

Ten percent of reservoir space originally occupied by free gas, or $m = 1/9$.

Gas-oil ratio (controlled) = 512 cubic feet per barrel, or $g = 2$.

Substituting values of $a$, $k$, $P$, $m$, and $g$, in equation

$$x = \frac{m(P + akP^2 - akpP - p)\ k(P - p - apP + ap^2)}{m(gP + gakP^2) + (1-k)p + akp^2 + gkP}$$

where $x$ is the fraction of the gas-free oil originally in the reservoir that has been produced up to a given time, we have,

$$x = \frac{54.55 - 0.88p + 0.00143p^2}{108.99 + 0.343p + 0.00143p^2}$$

Figure 1 is plotted from this equation. If the total production of oil in this assumed field is known, together with the average reservoir pressure corresponding to cumulative production, it is possible to estimate the total amount of oil in the reservoir. Assuming that by the time the reservoir pressure falls to 755 pounds per square inch, the cumulative recovery reaches the figure of 50,000,000 barrels, the curve indicates that 10 percent of the total oil in place has been produced; consequently, the total amount of oil originally present is 50,000,000 divided by 0.10, which is 500,000,000 barrels. If by the time the pressure has fallen to 600 pounds the total production is 110,000,000 barrels, these data would indicate the original amount of oil as 505,000,000 barrels. By averaging a number of such calculations made from data taken at various periods in the life of the field, a reasonably reliable estimate of the amount of oil in place in the reservoir can be made.

It will be seen from the graph that the maximum theoretical recovery of oil, namely, 250,000,000 barrels under the assumed conditions, cannot exceed 50 percent of the total oil present in the reservoir, because the reservoir energy will have been all spent by the time the cumulative production reaches that level. This conclusion is not altogether true, because an indeterminable amount of additional oil will be recovered by gravity. However, to secure a theoretical percentage of recovery higher than the one indicated, it will be necessary to reduce the energy consumption per unit of oil production, that is, by the reduction in the gas-oil ratio. This can be accomplished by more efficient control of individual wells, by treatment of wells with acid, by repressuring, etc.

The curve in Figure 1 should hold true as long as the assumed conditions remain constant. Any change in the average gas-oil ratio will necessarily change the slope of the curve and will necessitate setting up a new equation from which the fraction of recoverable oil is to be computed. This procedure must be followed each time a change in operating conditions is observed. It appears, therefore, that for a given field in which it is difficult to control conditions closely, or in which production characteristics are erratic, the method for estimating the fraction of recoverable oil developed by Coleman, Wilde, and Moore may become too involved.

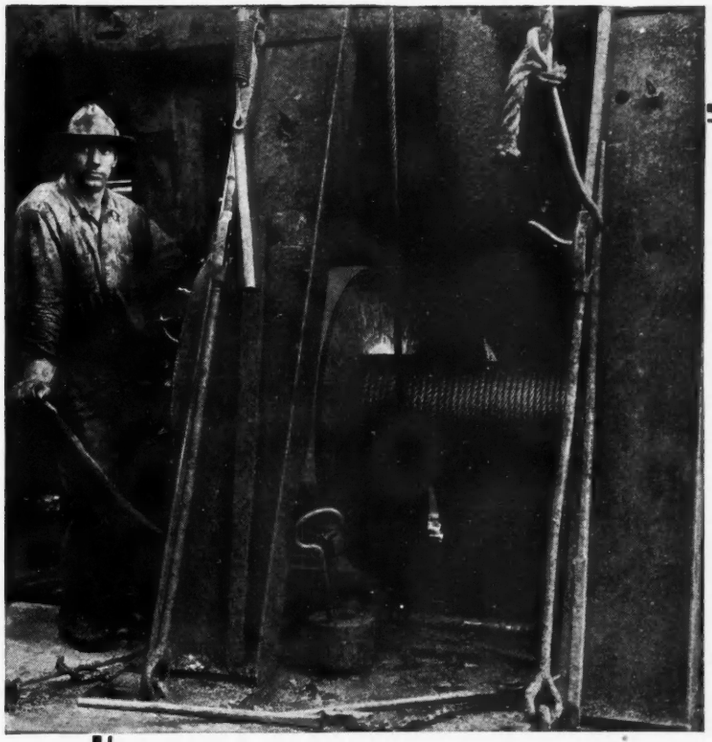
The amount of recoverable oil computed from the foregoing formula probably will always be greater than can be obtained in actual field operation. Profitable exploitation of the field should cease before the reservoir pressure falls to zero.

Observations of actual data in certain limestone fields under volumetric control indicate that the rate of total reservoir displacement is approximately proportional to the rate of decline in the reservoir pressure. When the cumulative recovery of fluids is plotted against corresponding pressures the resultant is a straight line.

In the hypothetical field already discussed, let the following be the cumulative production data and pressures corresponding to the various displacement figures observed at different times:

| Total Fluids Barrels | Reservoir Pressure Pounds |
|---|---|
| 0 | 1,029 |
| 122,000,000 | 900 |
| 212,000,000 | 800 |
| 305,000,000 | 700 |
| 397,000,000 | 600 |

Figure 2 is plotted from these data (solid line) and extended (dashed line) to the atmospheric pressure, at which point the cumulative production reaches the figure of 950,000,000 barrels of oil, gas, and water. Assuming that the oil production constituted 25



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percent of the total displacement during the time the data were secured, the indicated maximum ultimate recovery of oil should be equal to 950,000,000 × 0.25, or 237,500,000 barrels. However, the limit of economic recovery will be reached before the reservoir pressure declines to zero. Experience gained from the operation of pumping wells in this assumed field indicates that profitable operation of pumping wells ceases by the time the pressure falls to 110 pounds per square inch. Therefore, to arrive at a fractural figure for the ultimate recovery of oil it will be necessary to multiply 850,000,000 by 0.25, which gives 212,500,000 barrels.

The weakness of this method consists in the assumption that the future performance of the reservoir will approximate the past average performance. It is probable that the gas-oil ratio and the water production will increase with the age of the field and that the oil production will represent a smaller fraction of the total recovery of fluids per unit drop in the reservoir pressure. On the other hand, however, such factors as better production practice, gas conservation, and acid treatment of wells may tend to counterbalance this effect.

*Fields Under Hydraulic Control*: In fields of this type, the recovery of fluids from the reservoir may or may not be accompanied by appreciable reduction in the initial reservoir pressure, depending upon the effective replacement of withdrawn fluids by water. Therefore, the pressure decline method cannot be used.

The method of estimation of the ultimate amount of recoverable oil is based on the relationship of rise in oil-water contact to withdrawals made, and to movement of a possible gas cap. This method has been discussed by Sidney Judson and others in the reference already given and need not be duplicated here. Granting the assumption that the volume of oil and gas produced from the reservoir is equivalent to the volume of pore space in the portion of the reservoir invaded by water, or that the ratio between recoverable oil and oil in place is constant, plus or minus the increase or decrease in volume of the gas cap, it is possible to determine the average porosity of the reservoir. This can be determined by dividing the volume of fluid (taking into consideration the solubility of the gas in the oil, shrinkage of the oil, reservoir pressure and temperature, etc.) by the volume of the portion of the reservoir in question, in equivalent volumetric units. Then, assuming the continuity of reservoir conditions, it should be possible to make a reliable estimate of the total amount of oil in place by multiplying total acre-feet of the reservoir between the oil-water contact and the gas cap by the average percent porosity $\times \frac{45.560}{5.61}$. It is suggested that variations in the position of oil-water contact be observed periodically by means of Schlumberger or "water witch" methods, and the extent of rise of the contact correlated to the withdrawals. Averaging a number of such observations should increase the reliability of estimates.

## Summary and Conclusions

At this time no positive methods of estimation of petroleum reserves in prorated flush limestone fields are available owing to the peculiar character of the limestone reservoir, which lacks the relative uniformity of porosity and permeability found in sand fields. Predictions of per-acre recoveries in a new field based on recoveries obtained in "similar" older limestone fields may be highly erroneous.

Experimental data indicate that:

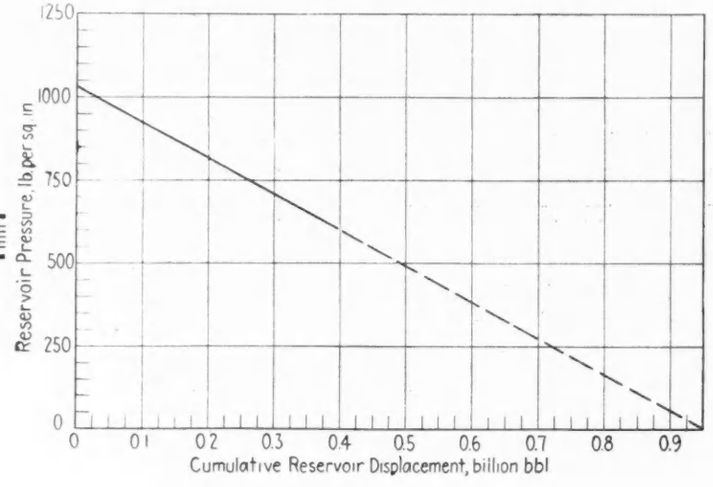
(1) In fields under volumetric control:
   (a) Coleman's formula may be used to obtain reliable estimates of the amount of oil originally present in the reservoir. The formula is also applicable for determination of recoverable oil, provided the average gas-oil ratio can be closely controlled.
   (b) Where such close control is lacking, the amount of recoverable oil can be estimated from the analysis of total recovery of fluids and corresponding decline in the average reservoir pressure.

(2) In fields under hydraulic control:
Estimates of recoverable oil and of oil in place can be had from study of withdrawals made and of rise in oil-water contact, together with changes in extent of the gas cap.

*This A.I.M.E. paper is one of several devoted by this Institute to crude oil reserves. Other A.I.M.E. reserve papers appeared in* THE OIL WEEKLY *of October 14, 1935.*

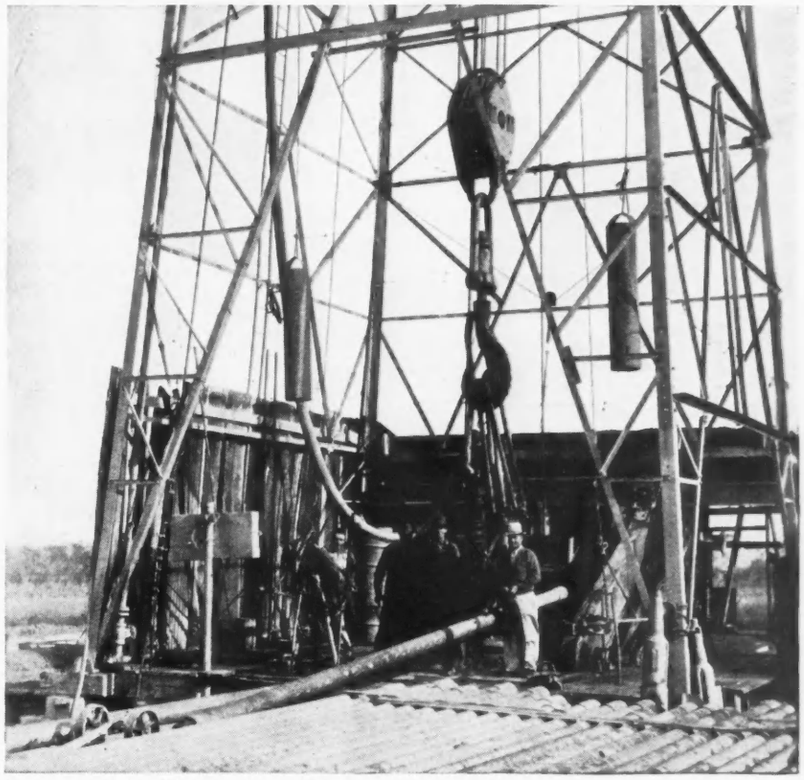
—The Editors.

**FIGURE 2**
**Relationship between reservoir pressure and cumulative reservoir displacement.**



# WHEN IT COMES TO RUBBER..

## *Drilling Contractor* HUGH HODGES *comes to* "U.S."



Like many drilling contractors of wide experience, Hugh Hodges — operating in the Oklahoma City district — adheres to one policy when it comes to buying mechanical rubber equipment. He knows that — whether it's rotary hose, suction hose, steam hose, packing or belting — he will get the most completely satisfactory service simply by saying, "U.S."

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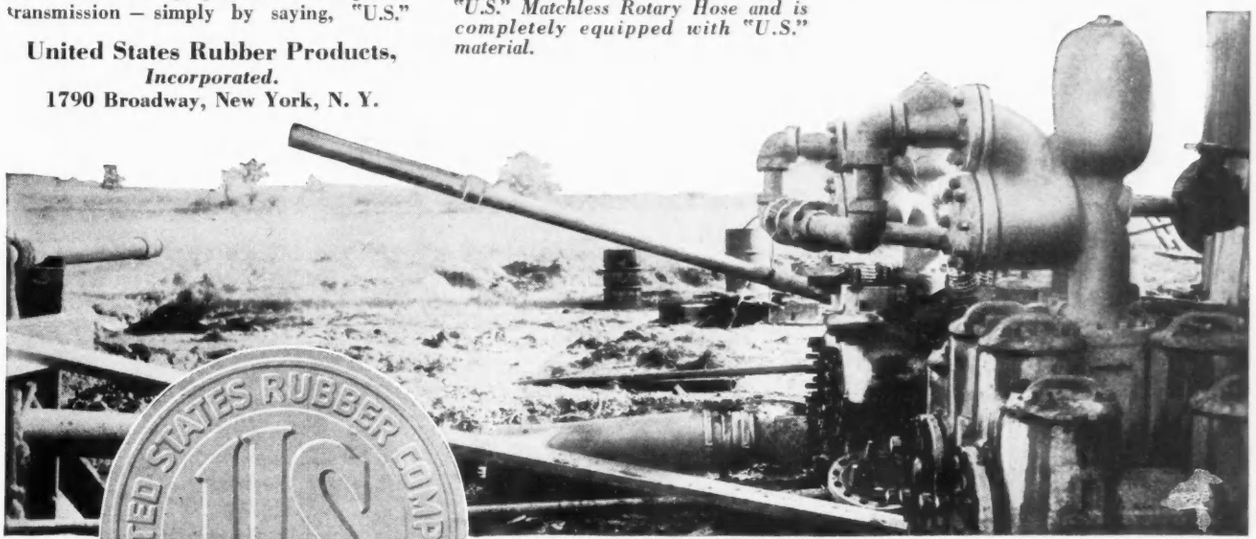



*"U.S." Giant Sand Suction Hose is in service on this Slush Pump, using "U.S." No. 101 Packing on the power end and No. 4480 Rings on the fluid end.*

**United States Rubber Company**

**SILTY SOIL HANDICAPS OVERCOME BY**

# *Mississippi Delta Drilling Practices*

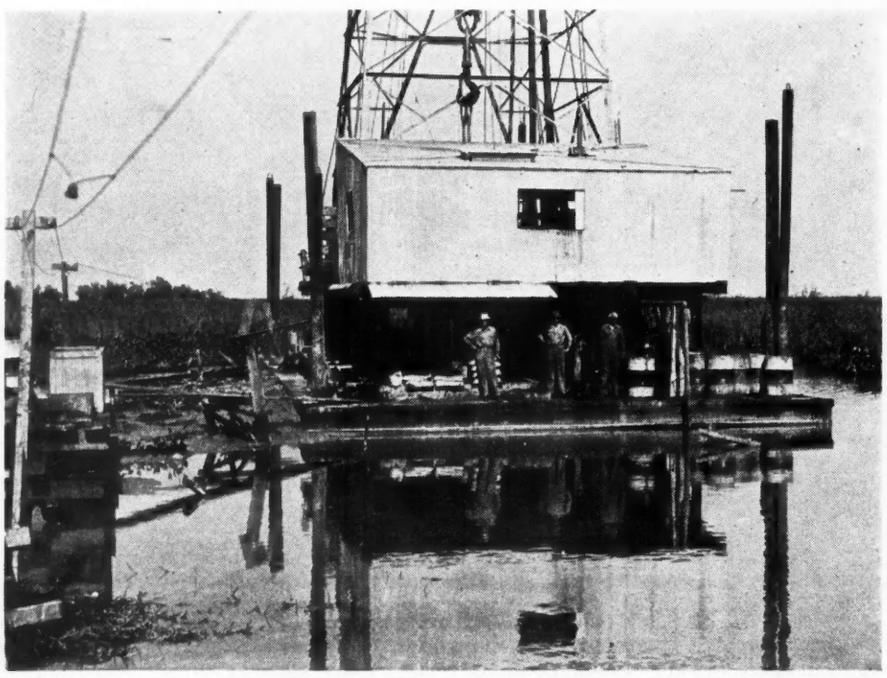
By BRAD MILLS, Associate Editor

THE new Garden Island Bay field, located on the extreme lower tip of the Mississippi delta in Plaquemines Parish, Louisiana, is one of the most interesting producing areas along the Gulf Coast. Besides being the most easterly field in Louisiana, Garden Island Bay occupies a unique position on silty land so restless that surface shifts in any direction may be expected. The location is about 100 miles below New Orleans, and the discovery of a promising oil field under such adverse conditions is a distinct contribution to geophysical and drilling progress.

Thirteen wells were drilled before oil production was developed, and The Texas Company deserves full credit for adding a new delta field in an area that would have discouraged the average operator of a few years ago. The discovery places a new valuation on the delta district and indicates other major oil accumulations within a radius of 100 miles of New Orleans.

The location of the field makes it necessary to carry out all operations under handicap. Most of the land in the field is covered with a mud turf in which buffalo or marsh grass thrives, but bare spots are common. Where no grass is found, the solt silt resembles hot lead. It is not uncommon for a man to sink four or five feet in this silty mud after stepping from the firmer footing offered by the grassy turf. A more stable formation is encountered below the silt, but the soft and oozing top layer prevents the laying of any type of satisfactory foundation on the surface.

All transportation to and from the field is by water, although an amphibian plane has been used some to transport the foreman and a few men to and from the area. The usual route from New Orleans is by automobile to Venice, a very small village located on the Mississippi River about 18 miles above the field, thence by boat on the main river and along the Johnson and Loomis passes, and finally by short canals to the locations. Transportation by water from New Orleans and from the open gulf is used extensively in the movement of equipment. Although the field is not located on one of the main passes, the channels leading through the area are navigable to an extent that permits the entry



**Foundation for the discovery well at Garden Island Bay was a steel barge that was floated to the location through a canal. Location of this derrick with reference to water in which equipment floats is shown in the picture on the opposite page.**

of large river boats and barges, and gives a full outlet at all seasons.

### Geophysical Work

The structure was discovered in 1928 by refraction seismograph, and the geophysical work was completed under very difficult conditions. No detailed map of the delta area had been made and it was difficult to chart a course that would take advantage of the natural channels and land sectors. Some of the surface equipment used by the geophysical crew included wind-driven boats and native pirougues. Some of the wind-driven boats were constructed so light and flat that they moved in as little as two inches of water. They were powered with small commercial car engines that drove air propellers, and could be pushed about readily in very shallow water and mud. The pirougues were hewed from the trunks of native trees or cedar trees, and made excellent "trailers" for transporting the dynamite and supplies. They drew little water and were easily pulled or pushed through the marshes between canals and water holes. The marsh buggy, a stripped-down automobile adapted to the swamps, was not used at Garden Island Bay.

It was unnecessary to make elaborate preparations for shot holes, and the chief difficulty lay in reaching the locations after they had been determined. Where there was a good depth of water, the shots simply were fired on bottom. At the more marshy and treacherous locations, the shot holes were first made with a preliminary shot of dynamite. This was followed with the shot that was recorded. In refraction work it was unnecessary to drill a deep shot hole. Another method of digging shot holes consisted of driving a section of casing and drilling a short distance below the casing. After the shot the casing was pulled.

Winter is the best season for geophysical work in the delta area. During this time water is more plentiful, mosquitoes are less abundant, and the weather is more pleasant. In carrying out this work, an old trapper or some person thoroughly familiar with the delta area becomes a member of the geophysical party. Such a person can save much time and expense in directing the party to and through the best passes, the firmest trails and the deepest water holes. Some parts of the delta tip look strong enough to support a man, but below the top crust is a four-foot thickness of silty mud that offers little strength as a foundation or roadway. The surface is so near the water level during the rainy season that the silty soil saturates itself.

The surveying of the area was a tedious task. In establishing township, section and lease lines, considerable trouble was experienced from shifting foundations. Flares, observation balloons and special foundations were used in the triangulation work. Transportation on the floating turf was difficult, and shifting of instruments after setting up gave trouble. Most of the lower delta district shows a changing and shifting tendency, and landmarks are established with difficulty unless they are resting on deep foundations.

### Development History

Location for The Texas Company's Garden Island Bay 1 was made in February, 1929, and drilling started in April. This well was abandoned June 1 in salt at 2117 feet after topping the formation at 2017 feet. Oil showings were encountered around 1700 feet, but a production test showed only salt water.

Drilling of the second well immediately followed the abandonment of the first test. A bad gas blowout occurred at 795 feet and the well caught fire. It was abandoned after being brought under control. The third well blew out at 1460 feet, but was brought under control and finally abandoned at 2004 feet.

**Living quarters at Garden Island Bay float and may be moved on short notice. The derrick in the background is that of the discovery well.**

The fourth well was started early in 1930 and was the deepest test yet drilled in the field. It was abandoned in February, 1931, at 5618 feet and failed to develop important showings. In locating this well an attempt was made to miss the salt and strike the flank, but apparently it was off structure.

The fifth well was abandoned at 801 feet after blowing out and being brought under control. The heavy gas flow was also found in the sixth well and this test was abandoned in December, 1932, at 816 feet. The seventh well was abandoned in March, 1933, at 2720 feet, after topping the salt at 2115 feet. The eighth well was abandoned in salt at 2500 feet. The ninth well topped the salt at 2100 feet and was abandoned at 2155 feet. No. 10 was abandoned at 1875 feet.

Garden Island 11 was completed as a gas well at 1672 feet and shut in. This completion has been a valuable contribution to field development. Garden Island 12 blew out at 1748 feet and cratered. It was brought under control and abandoned. Garden Island 14 was bandoned in January, 1935, at 2324 feet.

while Garden Island 15 was abandoned in May, 1935, at 3439 feet. The long stream of abandonments failed to discourage the company from further drilling activity.

Garden Island Bay 16, the discovery well, was completed September 13, 1935, at 4976 feet with an initial flow of about 600 barrels per day through a quarter-inch choke. The well was capable of a much higher production on a larger choke. This was the thirteenth well drilled on the structure and was completed on Friday the Thirteenth. Three locations were not drilled for various reasons.

After roughly defining the structure with reference to the salt with the first seven or eight wells, the company started drilling a straight row of wells in an effort to find flank production. The discovery well demonstrates the ease with which production may be missed around a piercement type dome, and also proves that most domes of this type will produce oil if enough drilling is done. The discovery well was 3300 feet lower structurally than the highest well and gives a good idea of the disturbance caused by piercement of a salt plug.

### Drilling Methods

The first four wells at Garden Island Bay were drilled with wooden mats used as derrick foundations. These mats were not entirely satisfactory, since they sank from one foot to 30 inches during drilling operations. A mat also was an unsteady foundation during a blowout, although the company refined its mat construction to afford the greatest possible safety under such conditions.

All the recent wells were drilled through the use of a steel barge that was floated through the canals to the well locations. The barge was sunk and became a very satisfactory well foundation in the shifting silt. The derrick, mud pumps, prime movers and all heavy equipment were normally located on the steel barge, which was 38 feet wide and 80 feet long. Barges used at Garden Island Bay were among the first sinking-floating types constructed by the company for use in the swampy areas, but they proved heavy enough for normal drilling operations to 5000 feet.

The discovery well and a number of the tests abandoned previously were drilled with two 125-horsepower gasoline engines as the principal power source. One engine was used for drilling and another for the slush pumps. Steam engines now are in use and much of the future drilling will be done with steam. Completion of the discovery well at almost 5000 feet with two small gasoline engines for power is considered an unusual feat, since drilling to such a depth under adverse conditions is seldom attempted with light equipment. By the use of eight lines and other precautions, the 125-horsepower gasoline engine on the draw works functioned satisfactorily.

Barges as derrick foundations offer a distinct safety factor during blowouts. Derricks were shaken down during blowouts at two barge locations, yet no serious damage was done to other heavy equipment on the barge. It was possible to float the barges in craters that might have enveloped the derrick and other equipment, had the foundation consisted of mats.

Drilling at Garden Island Bay has been accompanied by many formation difficulties. The first 1000 feet is an unconsolidated, silty formation that gives all forms of trouble during drilling operations. The pressure of the drilling outfit on the first mats used was enough to force dry shale into the hole and far up into the casing. This downward pressure apparently created a squeezing action that drove the shale into the shallow hole previously drilled. This entry of the shale into the hole necessitated redrilling and cleaning out through the surface casing, since it was not unusual for the shale to fill the casing to the surface. Action of the shale necessitated running one string of casing after another in a number of wells.

After passing through the surface silt and recent formations, Miocene shales are encountered. Streaks of shales and sands are found to the greatest depth reached on the structure, but the shales predominate. Except for the surface formations, drilling has been confined entirely to the Miocene.

While coming out of the hole with the drill pipe, it is necessary to run the slush pumps without interruption. A full mud head is necessary to prevent either the shale from entering the hole or the gas from causing trouble. The swabbing action of the drill pipe plus the loss of displacement caused by withdrawal of the drill pipe have been enough to cause trouble when the pumps were idle, especially at shallow depths that involved the gas strata. A full head of heavy mud has been effective in most of the wells drilled.

Abnormally heavy water flows were found at various levels in a number of wells. These flows were difficult to explain, since they apparently exerted a greater force than would have been exerted by a straight head of water reaching from the surface to bottom. The tremendous reservoir energy generated by the water under abnormal pressures necessitated the use of uniform drilling mud.

Casing represents a large fraction of the total well cost in this field. The discovery well has 20-inch casing landed at 125 feet; 18-inch cemented at 500 feet; 13⅜-inch at 4000 feet, and 7⅝-inch on top of the oil sand below 4900 feet. In a few of the shallower wells, as many as six strings of casing had been run. These included 20-inch, 18-inch, 16-inch, 13⅜-inch, 8⅝-inch and 4½-inch strings. The least expensive way to make progress was through the running of additional casing strings to save the hole already made.

No pipe line outlets have been provided and it will be unnecessary to build a line of considerable length. Johnson Pass, running through the field, has 19 feet of water, and it is possible to get the oil by barge to one of the main passes in a minimum of 11 feet of water in the dry season. Construction of a pipe line along the river bank for a distance of about four miles is being considered, and such a line would permit direct loading of ocean-going tankers in a navigable pass to the north.

The banks of the passes are very firm, in contrast with the silty soil between the passes. These natural levees have been formed by the overflow of water from the passes or channels. In leaving the channels, the sand and heavier solids in the muddy water are immediately dropped after the water loses its principal momentum. The lighter solids are carried farther by the spreading water and drop out after the water has lost almost all or all of its momentum. Deposition of these finer solids form the silty flats between the passes.

The oil barges now in use for transporting the oil from the field storage tanks to the large ocean-going tankers in the main pass are 38 x 178 x 7 feet and hold 7500 barrels. They draw about six feet when loaded. Three 1000-barrel steel tanks have been erected on the bank of the pass and a short distance from the discovery well.

# WHEN MUD AND WEATHER SAY NO

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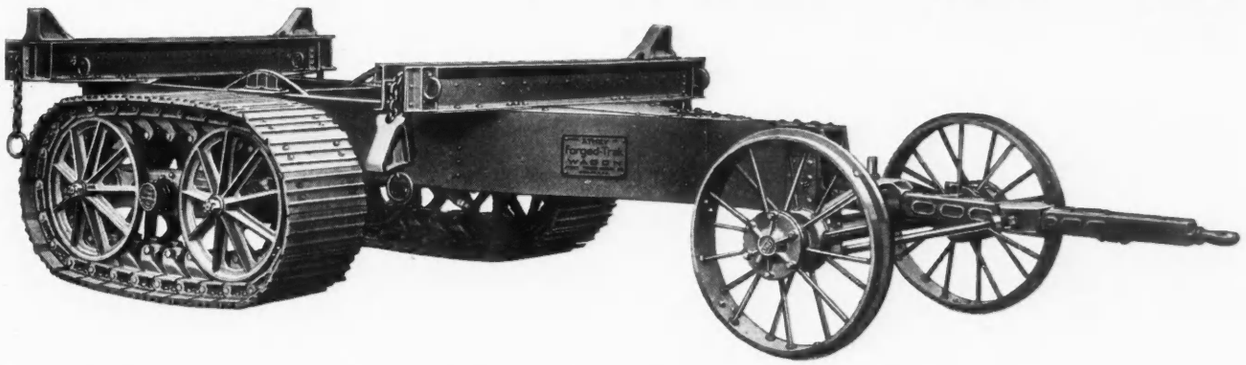

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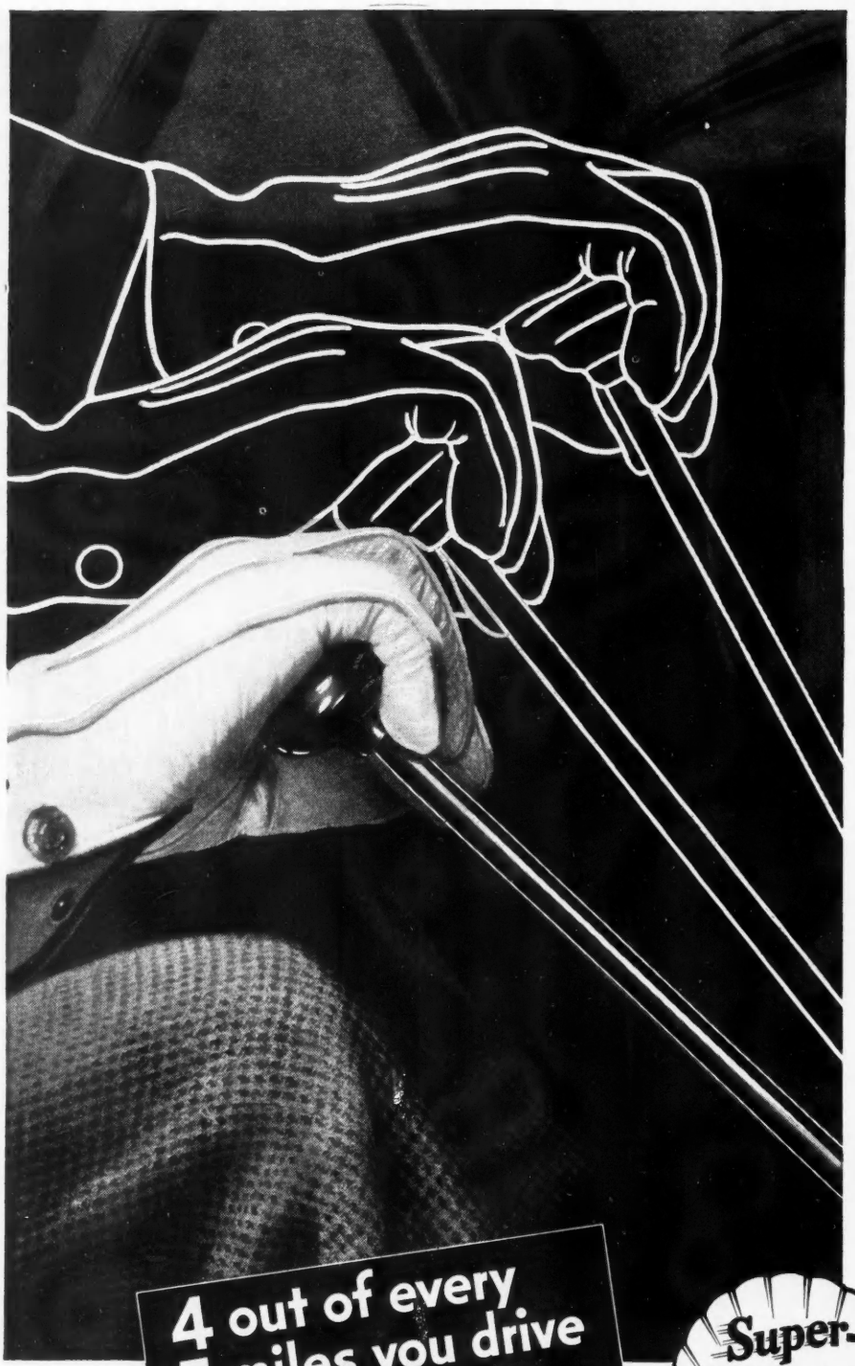

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YOU wouldn't like to drive 3 MILES in low gear . . . yet you often do it in a week's stop-and-go driving! You run that far in "low" as you shift gears in daily "errand drives."

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# *Prices Higher*

## MID-CONTINENT MARKET FIRM NO CHANGE ON PACIFIC COAST

WHILE California's crude oil and gasoline prices have continued unchanged at depressed levels, the markets in the rest of the country have been remarkably firm. Despite the adverse effect of the West Coast conditions and the progress of the fall season, Mid-Continent gasoline tank car prices last week showed a one-eighth cent per gallon improvement over the previous week's quotations.

That increase of refinery prices was unexpected, and it pushed the quotations back up to the peak levels of the year. The new prices were nearly twice those prevailing at the corresponding time last year, when hot oil output in East Texas was averaging around 100,000 barrels daily. To find tank car prices higher than those of last week, it was necessary to check the records back for five years, to the latter part of 1930.

The rise of the Mid-Continent refinery prices last week appeared to be due primarily to emergency purchases of gasoline by major companies, necessitated by the fact demand has exceeded expectations. Largely responsible for the circumstance that demand was above anticipations was the continuing favorable weather in a season usually marked by some inclement weather in some sections of the country.

While the weather conditions tended to promote strong markets, wholesale and retail, east of California, there was another influence at work toward a similar end. It was some tightening up of proration in the East Texas field, that brought a reduction of hot oil producing and refining.

### Hot Oil Output Lower

Last week the illegal output of oil in East Texas was indicated to have dropped to around 37,000 barrels daily. In the previous week the estimate was about 45,000 barrels daily. Recently the Texas Railroad Commission's East Texas field proration was put into the hands of Captain E. N. Stanley, as chief of enforcement, and since his inauguration there has been noted some decline of hot oil output, as he and his organization have put forth special efforts to make a good showing in results.

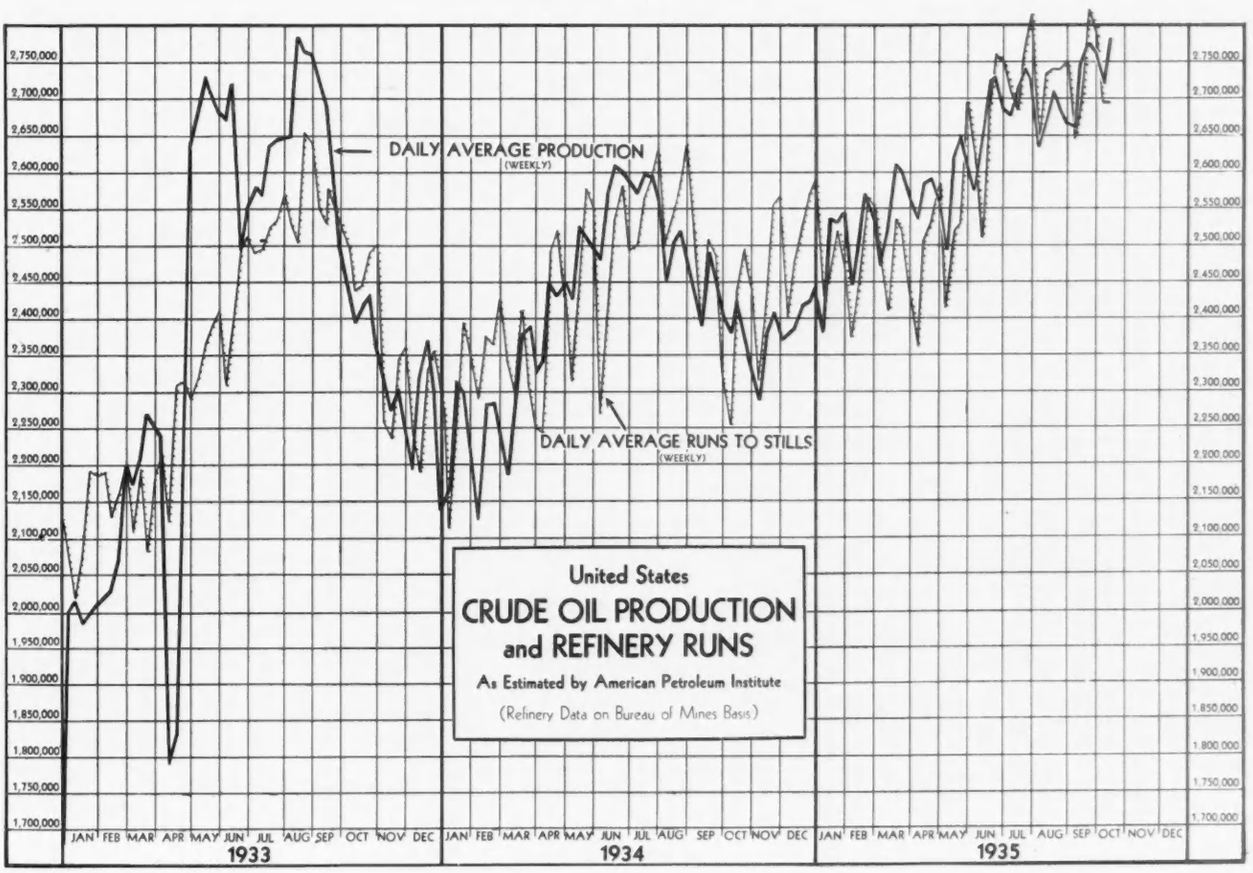
### Mid-Continent Prices Up

At Mid-Continent refineries last week gasoline prices were up one-eighth cent a gallon above the previous week's levels, with exception of the high octane material, which was up an eighth cent in East Texas but unchanged in Oklahoma and North Texas.

The new prices on U. S. motor gasoline in Group Three (Oklahoma) region and North Texas were as follows: third grade, below 62 octane, was 4¾ cents a gallon; standard or middle grade, 62-67 octane, was 5¼ cents; and premium grade, 68-70 octane, was 5⅝ cents. In East Texas the corresponding prices were 4⅝, 5⅛, and 5⅝ cents a gallon.

### California Still Depressed

In California no immediate improvement of either crude oil or gasoline



prices is in prospect, although there is hope that prices would increase if the producers could succeed in holding crude production within the 590,700 barrels per day set by the independent producers as the economic limit for the closing quarter of the year. However, the state's output in the opening half of October was running more than 50,000 barrels per day above that level, and there has not been any encouragement that the desired goal can be achieved. Furthermore, the 590,700 barrel limit itself is substantially more than the Bureau of Mines has recommended.

## CONTROL BETTER

### In East Texas and output showing a decrease

EAST TEXAS refiners that can qualify for federal tenders on their gasoline production were credited late last week with having contracted for the sale of their output over the remainder of October at 4⅝ cents per gallon. This same grade of motor fuel turned out from confiscated oil and crude of a questionable source, with shipments restricted to points within the state, was difficult to market because of the volume offered being above normal demand at 3¼ to 3⅜ cents per gallon. Shipments of the latter via tank trucks and rail were supposed to carry the approval of the state tender board.

The revamped federal tender board is tightening up on enforcement of the Connally measure that bans interstate movement of products derived from illicit crude production, and has reduced the tank truck hauls into Shreveport and other points in eastern Louisiana to a nominal volume through recent arrests. Only eight of the 27 operating plants in East Texas were credited with shipping under federal tenders, according to a mid-week check, while the remainder carried the approval of the state tender board on their deliveries to intrastate points. However, the majority group were processing mostly confiscated oil, and crude from other sources that can not pass muster before the federal agency. Such plants were handling petroleum products originating from controlled wells, else that bought from other sources at about 40 cents per barrel.

Volume of excess crude production in the East Texas field is reported to have declined somewhat the past week, owing to state authorities answering a renewed flood of criticism by harassing the chronic violators. Two heavy penalty suits filed by the attorney general, with threat of receiverships for the plants involved, served as a warning that a new offensive is underway against illegal practices. Captain E. N. Stanley, who was restored as chief enforcement officer for the commission on October 1, has reduced the volume of untendered gasoline leaving plants, generally at night, by stationing men at the entrance of most of the refineries catering to tank truck sales to turn back all loads lacking proper manifests. Actual enforcement of proration is largely confined to a transportation blockade, and this interference has had periodical breakdowns.

Tank car movement of products from East Texas during the week ending October 13 increased to 11,199,133 gallons due primarily to heavier shipments of crude and topped crude to other refining and storage centers within the state. Approximately 852,249 gallons of crude and 473,750 gallons of topped crude, which could not qualify for federal tenders, were handled by railroads during the week. Rail shipments of gasoline amounted to 4,431,507 gallons, as compared to 4,614,895 gallons the previous week, due to plants diverting an increased volume of motor fuel to tank truck sales.

### East Texas Tank Car Shipments

Week Ending October 13, 1935

| PRODUCTS | No. Cars | Estimated Gallons |
|---|---|---|
| Gasoline | 548 | 4,431,507 |
| Fuel Oil | 252 | 2,320,597 |
| Casinghead Gasoline | 228 | 1,972,473 |
| Crude Oil | 92 | 852,249 |
| Distillate | 59 | 477,623 |
| Topped Crude | 53 | 473,750 |
| Kerosene | 30 | 242,405 |
| Gas Oil | 22 | 177,464 |
| Residuum | 19 | 153,623 |
| Naphtha | 12 | 97,442 |
| Total | 1,315 | 11,199,133 |
| Total Previous Week | 1,296 | 11,097,948 |
| Intrastate | 492 | ..... |
| Interstate | 480 | ..... |
| Coastwise | 343 | ..... |
| Total | 1,315 | ..... |

## NO SKELLY CHANGES

TULSA.

AT the annual stockholders meeting of Skelly Oil Company held here at noon Friday, all directors and officers were reelected. Only one change in the official family was made, the addition of George Stallwitz of Wichita, Kansas, as a director.

Only routine business was transacted at the meeting, an official statement said. Rumors of many changes in the Skelly personnel as a result of Mission Oil Company control thus didn't materialize.

W. G. Skelly, president; C. C. Herndon, vice president; R. T. Lyons, vice president; W. T. Atkins, vice president; Emby Kaye, vice president; H. M. Stalcup, vice president; F. T. Hopp, secretary-treasurer, with Joe S. Carey, H. C. Olcott, and Stallwitz are directors.

### Summary of Wells Completed in the United States

Week Ending October 12, 1935

| | Completions | Oil Wells | Gas Wells | Failures | Initial Production | Total Completions 1935 | Total Completions this date 1934 |
|---|---|---|---|---|---|---|---|
| Alabama | ... | ... | ... | ... | ..... | 4 | 3 |
| Arkansas | 3 | 2 | ... | 1 | 70 | 108 | 67 |
| California | 21 | 15 | ... | 6 | 12,040 | 673 | 318 |
| Colorado | ... | ... | ... | ... | ..... | 9 | 19 |
| Illinois | ... | ... | ... | ... | ..... | 9 | 14 |
| Indiana | 12 | 1 | ... | 11 | 30 | 170 | 130 |
| Kansas | 30 | 16 | 1 | 13 | 22,710 | 1,100 | 720 |
| Kentucky | ... | ... | ... | ... | ..... | 137 | 189 |
| Louisiana | 11 | 6 | 1 | 4 | 6,545 | 567 | 611 |
| Michigan | 15 | 7 | 2 | 6 | 7,925 | 439 | 377 |
| Mississippi | 2 | ... | 1 | 1 | ..... | 18 | 31 |
| Montana | 4 | 3 | 1 | ... | 280 | 129 | 156 |
| New Mexico | 6 | 6 | .... | ... | 10,270 | 222 | 88 |
| New York | ... | ... | ... | ... | ..... | ... | 4 |
| Ohio | 38 | 8 | 15 | 15 | 135 | 1,151 | 822 |
| Oklahoma | 51 | 38 | ... | 13 | 42,860 | 1,875 | 1,468 |
| Pennsylvania | 1 | ... | 1 | ... | ..... | 101 | 251 |
| Texas | 146 | 112 | 21 | 13 | 232,635 | 9,316 | 7,644 |
| Utah | ... | ... | ... | ... | ..... | 1 | 3 |
| West Virginia | 6 | 3 | 3 | ... | 20 | 377 | 314 |
| Wyoming | 2 | 1 | ... | 1 | 20 | 58 | 38 |
| Total this week | 348 | 218 | 46 | 84 | 335,540 | 16,485 | 13,373 |
| Total last week | 364 | 228 | 33 | 104 | 413,900 | ... | ... |
| Total this year | 16,485 | 10,829 | 1,369 | 4,288 | 31,442,663 | ... | ... |

### Comparison of Permits Granted for New Wells

| STATE— | Week Ending Oct. 12 | Total this Mo. | Total this Year | Total this Date Last Year | 1934 Year Total |
|---|---|---|---|---|---|
| Arkansas | 1 | 3 | 48 | 62 | 100 |
| California | 20 | 42 | 745 | 450 | 629 |
| Louisiana | 17 | 30 | 665 | 660 | 799 |
| Kansas | 21 | 45 | 921 | 759 | 1,015 |
| Michigan | 12 | 40 | 557 | 374 | 460 |
| Oklahoma | 49 | 99 | 1,774 | 1,590 | 2,045 |
| Texas | 228 | 351 | 8,704 | 8,150 | 10,550 |
| Total | 348 | 610 | 13,414 | 12,045 | 15,598 |

# PRODUCTION DOWN

## Nation's output averages 2,773,775 barrels daily

UNITED STATES crude oil production for the week ending October 19 was slightly lower than in the previous week, mainly due to the lower output in Oklahoma with the rest of the country revealing only slight changes. The daily average of 2,773,775 barrels was around 219,575 barrels over the indicated market demand for October as estimated by the Bureau of Mines.

In Oklahoma the daily average of 505,250 barrels was 11,375 barrels under the output of the previous week. The Oklahoma City field declined over 20,000 barrels but other sections of the state, principally the Seminole area, somewhat offset this drop. The state, as a whole, followed its normal trend of reducing production as the month advances to stay within allowable quotas. The state was only 12,350 barrels over the daily demand estimate of the Bureau of Mines for the current month.

Kansas production continued to rise, as in the previous week. The daily average output of 149,200 barrels was raised mostly by the Oxford and the Lorraine areas. This was around 3100 barrels over the indicated demand figure.

The crude oil output in Texas rose some 2150 barrels per day during the past week, bringing the daily average production to within 3150 barrels of the estimated daily market demand for the present month. The Panhandle district, which is subject to heavy fluctuations on account of the open flow gauging of heavy new producers, declined 8800 barrels per day from the production of the previous week; but the Gulf Coast section showed gains at Barbers Hill and at Anahuac to bring the state as a whole above the production average for the previous week.

In the East Texas area a tightening of proration enforcement was reflected in a drop in the estimated hot oil production to around 37,000 barrels per day, the lowest figure in some time. Proration authorities lately have been putting forth special efforts to reduce illegal producing and refining of oil in that section.

On the West Coast there was little change in the daily average production for the past week. However, there were a few significant trends in different sections of California. Long Beach, Inglewood and Elwood declined noticeably, while Kettleman Hills and Mountain View made rather heavy gains. The daily average of 642,000 barrels was 1000 barrels under the production of the previous week, but still exceeds the recommendations of a fact finding committee of the Emergency Board of Independent California Producers by some 51,300 barrels and the indicated market demand of the Bureau of Mines by 144,300 barrels.

The northern section of Louisiana, under the influence of the new field at Rodessa, raised the total for the

## United States Crude Oil Production

**Estimates Compiled by THE OIL WEEKLY**

| DISTRICT OR STATE | BARRELS DAILY FOR WEEK ENDING October 19 | October 12 |
|---|---|---|
| TEXAS— | | |
| Texas Panhandle | 53,000 | 58,800 |
| North Texas | 59,300 | 59,400 |
| West Central Texas | 25,400 | 25,500 |
| West Texas | 155,000 | 155,000 |
| East Central Texas | 44,200 | 44,000 |
| *East Texas Field | 427,350 | 426,000 |
| †South Texas | 61,200 | 61,100 |
| †Texas Gulf Coast | 196,900 | 190,400 |
| *Total Texas | 1,022,350 | 1,020,200 |
| OKLAHOMA— | | |
| Oklahoma City | 134,150 | 154,825 |
| Seminole Area | 130,125 | 124,500 |
| Tatums | 4,450 | 4,600 |
| Luclen | 9,900 | 10,200 |
| Fitts | 31,650 | 27,950 |
| Edmond | 8,075 | 6,225 |
| Others | 186,900 | 188,325 |
| Total Oklahoma | 505,250 | 516,625 |
| KANSAS— | | |
| Ritz-Canton | 8,675 | 8,925 |
| Voshell | 4,450 | 4,425 |
| Nikkel-Hollow | 6,000 | 5,775 |
| Sedgwick | 6,850 | 7,325 |
| Oxford | 8,500 | 7,250 |
| Burrton-Haury | 16,125 | 15,925 |
| Lorraine | 7,800 | 7,175 |
| Others | 90,800 | 90,425 |
| Total Kansas | 149,200 | 147,225 |
| LOUISIANA— | | |
| North Louisiana | 29,625 | 26,800 |
| Louisiana Gulf Coast | 122,150 | 122,000 |
| Total Louisiana | 151,775 | 148,800 |
| ARKANSAS | 29,850 | 30,225 |
| CALIFORNIA— | | |
| Long Beach | 76,000 | 78,000 |
| Santa Fe Springs | 54,500 | 54,500 |
| Huntington Beach | 43,000 | 43,500 |
| Dominguez | 21,000 | 21,500 |
| Inglewood | 14,000 | 17,000 |
| Ventura Avenue | 33,000 | 33,500 |
| Seal Beach | 7,000 | 6,000 |
| Midway-Sunset | 58,500 | 57,000 |
| Elwood | 12,000 | 14,000 |
| Kettleman Hills | 99,000 | 93,500 |
| Mountain View | 36,000 | 33,500 |
| Playa del Rey | 17,500 | 17,500 |
| Others | 170,500 | 173,500 |
| Total California | 642,000 | 643,000 |
| MOUNTAIN STATES— | | |
| Wyoming | 39,450 | 40,900 |
| Montana | 13,000 | 13,100 |
| Colorado | 4,250 | 4,500 |
| Total Rocky Mountain States | 56,700 | 58,500 |
| NEW MEXICO | 56,500 | 56,300 |
| EASTERN STATES | 105,400 | 105,400 |
| MICHIGAN | 54,750 | 53,000 |
| *Total United States | 2,773,775 | 2,779,275 |
| *Surreptitiously produced oil in East Texas, not included in above figures, estimated at | 37,000 | 45,000 |
| Grand Total, including surreptitious production | 2,810,775 | 2,824,275 |

†Coastal District of South Texas is included with Texas Gulf Coast.

## Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks, and Cracked Gasoline Production, Week Ended October 12, 1935

**(Figures in thousands of barrels of 42 gallons each)**

| DISTRICT | Daily Refining Capacity of Plants | | | Crude Runs to Stills | | Stocks of Finished Gasoline | | | (a) Stocks of Unfinished Gasoline | (b) Stocks of Other Motor Fuel | Stocks of Gas and Fuel Oil | Daily Charging Capacity of Cracking Units | | | Cracked Gasoline Production |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Potential Rate | Reporting | | Daily Average | % Operated | At Refineries | Bulk Term. in Trans. & Pipe Lines | Total at Refys. Term. etc. | | | | Potential Rate | Reporting | | Daily Average |
| | | Total | % | | | | | | | | | | Total | % | |
| East Coast | 612 | 612 | 100.0 | 478 | 78.1 | 4,408 | 8,758 | 13,166 | 838 | 235 | 13,169 | 534 | 534 | 100.0 | 102 |
| Appalachian | 154 | 146 | 94.8 | 100 | 68.5 | 1,109 | 660 | 1,769 | 254 | 90 | 898 | 79 | 78 | 98.7 | 27 |
| Ind., Ill., Ky | 442 | 424 | 95.9 | 352 | 83.0 | 4,071 | 3,280 | 7,351 | 576 | 45 | 4,398 | 349 | 348 | 99.7 | 121 |
| Okla., Kans., Mo | 453 | 384 | 84.8 | 271 | 70.6 | 2,337 | 1,584 | 3,921 | 432 | 755 | 4,792 | 256 | 228 | 89.1 | 60 |
| Inland Texas | 330 | 160 | 48.5 | 81 | 50.6 | 958 | 93 | 1,051 | 192 | 1,780 | 1,548 | 148 | 105 | 70.9 | 22 |
| Texas Gulf | 617 | 595 | 96.4 | 575 | 96.6 | 4,348 | 302 | 4,650 | 1,558 | 145 | 11,993 | 399 | 393 | 98.5 | 119 |
| Louisiana Gulf | 169 | 163 | 96.4 | 130 | 79.8 | 623 | 382 | 1,005 | 291 | ..... | 4,722 | 77 | 74 | 96.1 | 22 |
| North La.,—Ark | 80 | 72 | 90.0 | 39 | 54.2 | 195 | 128 | 323 | 57 | 160 | 479 | 46 | 44 | 95.7 | 8 |
| Rocky Mountain | 97 | 60 | 61.9 | 47 | 78.3 | 553 | ..... | 553 | 114 | 105 | 802 | 46 | 39 | 84.8 | 13 |
| California | 852 | 789 | 92.6 | 485 | 61.5 | 5,825 | 2,323 | 8,148 | 944 | 2,120 | 65,198 | 280 | 280 | 100.0 | 65 |
| TOTALS WEEK: October 12, 1935 | 3,806 | 3,405 | 89.5 | 2,558 | 75.1 | 24,427 | 17,510 | 41,937 | 5,256 | 5,435 | 107,999 | 2,214 | 2,123 | 95.9 | 559 |
| October 5, 1935 | 3,806 | 3,405 | 89.5 | 2,519 | 74.0 | 25,204 | 17,168 | 42,372 | 5,415 | 5,580 | 109,016 | 2,214 | 2,123 | 95.9 | 582 |

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Oct. 12, 1935 compared with Oct. 1934 Bureau figures.

| | | | |
|---|---|---|---|
| Estimate B. of M. Basis, October 12, 1935 | 2,735 | | 595 |
| Estimate B. of M. Basis, October 5, 1935 | 2,695 | | 615 |
| U. S. B. of M., October 1934: Daily Average Crude Runs | 2,432 | U. S. B. of M., October, 1934 Daily Average Cracked Prod. | 517 |

(a) Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b) Estimated. Includes Unblended Natural Gasoline at refineries and plants; also Blended Motor Fuel at plants.

state around 3000 barrels per day over the production of the previous week.

The Gulf Coast section remained about the same but the 151,775 barrels daily average for the entire state was 26,675 barrels over the indicated market demand for October.

Other sections of the country were rather steady in crude production with the Rocky Mountain area showing a slight decline in all sections, and Michigan continuing to gain. The constant increase in the Michigan area recorded for the past few weeks has raised the daily production of that state to 15,250 barrels, or approximately 39 percent, above the indicated market demand.

## COMPLETING LINE

### Keystone gasoline carrier ready within two weeks

**Philadelphia, Pa.**—Construction work on the Keystone Pipe Line Company's 165-mile six-inch gasoline line extension from a point near Mechanicsburg to Pittsburgh, is slated to be completed within about two weeks. The east half of the line has been tested and filled with gasoline to a point below Altoona, as it is planned to start delivering gasoline to Pittsburgh immediately after Marathon Construction Corporation, Dallas, contractors engaged in building the line, complete and test the last section.

Keystone Pipe Line Company ordered work started the past week on a 15-mile branch line from its new trunk line extension, and other short units are planned so as to tie in with cities adjacent to the system. The company is a subsidiary of The Atlantic Refining Company, and handles gasoline produced by the latter's refinery near Philadelphia.

## SEEK TO CONFISCATE

### State of Texas seeking title to 120,000 barrels

**Austin.**—A suit to confiscate 120,000 barrels of oil has been filed in the 126th District Court by Attorney General McCraw.

The suit was brought against the oil and Wiley Page, O. L. Hastings, and C. F. Dodson.

Hastings and Dodson filed disclaimers and the court confiscated the oil as to Page. Service on unknown claimants, however, has not yet been perfected.

For that reason Jack Lewis, named receiver for the oil, has been instructed to place it in steel storage where it is to remain until the case has been finally adjudicated.

Arguments were advanced at the hearing to show that the oil was fugitive rather than excess production, which might result in a complete revision of the court's decision.

## KERR ELECTED

### Mid-Continent Oil & Gas Association president

**Tulsa.**—Robert L. Kerr, of the firm of Anderson & Kerr Drilling Company of Oklahoma City, was elected president of the Kansas-Oklahoma Division of the Mid-Continent Oil and Gas Association Friday. He succeeds E. R. Filley, manager of the Kansas-Oklahoma-Kentucky Division of The Texas Company. Rush Greenslade, vice president, Gypsy Oil Company, was renamed first vice president; T. C. Johnson, independent operator of Wichita, vice president for Kansas; John H. Kane, executive vice president, Phillips Petroleum Company, vice president for northern Oklahoma; Wirt Franklin, Ardmore, vice president for southern Oklahoma; Walter Ferguson, executive vice president, and Clarel B. Mapes, secretary-treasurer.

## POWER CLUB

**Oklahoma City.**—Directors of Petroleum Electric Power Club at an informal meeting in Joplin, Missouri, voted to hold the next meeting at Dallas, Texas, December 4, 5 and 6. A program is now being worked out, announces W. H. Stueve of Oklahoma Gas and Electric Company.

# CRUDE OIL PRICE QUOTATIONS

**(Figures Represent Basic or Flat Prices—Revised to October 18, 1935)**

| DISTRICT | Low Grav. | Dif. | High Grav. | Date |
|---|---|---|---|---|
| **Oklahoma-Kansas** | 28—$ .84 | 2¢ | 40—$1.08 | 9-29-33 |
| **N. and N.-C. Texas** | 28— .79 | 2¢ | 40— 1.03 | 9-29-33 |
| **Texas Panhandle** | | | | |
| Gray County | 34— .79 | 2¢ | 40— .91 | 9-29-33 |
| Carson-Hutchinson | 34— .69 | 2¢ | 40— .81 | 9-29-33 |
| **West Texas** | | | | |
| Ector, Pecos, W'kler | *.75 | | | 9-29-33 |
| Crane, Upton, Howard and Glasscock | *.70 | | | 9-29-33 |
| **East Texas** | *1.00 | | | 9-29-33 |
| **Texas Gulf Coast** | | | | |
| Anahuac-Dickinson | 30— .94 | 2¢ | 40— 1.14 | 8-20-35 |
| Conroe | 35— 1.09 | 2¢ | 40— 1.19 | 9-29-33 |
| Tomball | *1.15 | | | 9-29-33 |
| Cleveland | *1.00 | | | 1-11-34 |
| †Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge | Below 20— .82 | 2¢ | 34— 1.12 | 9-29-33 |
| **South and S. W. Texas** | Below | | | |
| Refugio (Light) | 20— .82 | 2¢ | 34— 1.12 | 9-29-33 |
| Refugio (Heavy) | *.80 | | | 6-29-35 |
| Saxet | *.80 | | | 6-29-35 |
| Mirando | *.75 | | | 6-29-35 |
| Pettus | *1.05 | | | 9-29-33 |
| Salt Flat | *.87 | | | 9-29-33 |
| Darst Creek | *.87 | | | 9-29-33 |
| Port Lavaca | *.97 | | | |
| **Arkansas** | | | | |
| El Dorado (Light) and Rainbow | 29— .79 | 2¢ | 40— 1.03 | 3-17-34 |
| El Dorado East Field and Smackover | *.70 | | | 9-29-33 |

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

| DISTRICT | Low Grav. | Dif. | High Grav. | Date |
|---|---|---|---|---|
| **North Louisiana** | 29— .79 | 2¢ | 40— 1.08 | 9-29-33 |
| Urania | *.85-*.87 | | | 1- 1-34 |
| **South Louisiana** | Below | | | |
| Lockport | 20— .80 | 2¢ | 34— 1.10 | 9-29-33 |
| Iowa, Cameron Mds. | Below 20— .70 | 2¢ | 34— 1.00 | 9-29-33 |
| **Rocky Mountain States** | | | | |
| Salt Creek | 29— .84 | 2¢ | 40— 1.08 | 9-29-33 |
| Elk Basin | *1.17 | | | 9-29-33 |
| Grass Creek (Light) | *1.17 | | | 9-29-33 |
| Big Muddy | *1.01 | | | 9-29-33 |
| Rock Creek | *1.02 | | | 9-29-33 |
| Sunburst | *1.20 | | | 7-19-35 |
| Lance Creek | *1.02 | | | 8-25-33 |
| Osage | *.62 | | | 8-25-33 |
| Cat Creek | *1.07 | | | 8-25-33 |
| Cut Bank | *1.45 | | | 9-29-33 |
| Pondera | *1.05 | | | 9-29-33 |
| Hog Back, N. M. | *1.00 | | | 9- 8-33 |
| Lea County, N. M. | *.75 | | | 9-29-33 |
| **Mid-West States** | | | | |
| Lima | *1.15 | | | 2- 1-35 |
| Illinois | *1.13 | | | 1- 5-34 |
| Princeton | *1.13 | | | 1- 5-34 |
| Western Kentucky | *1.13 | | | 5-22-35 |
| **Pennsylvania** | | | | |
| Bradford | *2.00 | | | 9- 6-35 |
| Sw. Pa. Pipe Line | *1.72 | | | 9- 6-35 |
| Eureka Pipe Line | *1.67 | | | 9- 6-35 |
| Buckeye Pipe Line | *1.52 | | | 7-16-35 |
| Corning Grade | *1.32 | | | 10- 2-33 |
| **Michigan** | | | | |
| Central Michigan | *1.20 | | | 9-30-33 |
| Muskegon | *.70-1.00 | | | 12-31-32 |
| **Canada** | | | | |
| Petrolia | *2.10 | | | 9- 9-33 |
| Oil Springs | *2.17 | | | 9- 9-33 |

* All gravities—flat rate.

## MAJOR PRICE CHANGES

| | Penna. (Nat. Tr.) | Mid-Cont. (36 Gr.) | Calif. (26 Gr.) |
|---|---|---|---|
| March 5, 1933 | ..... | ..... | Cut 24 |
| May 2, 1933 | ..... | Cut 19 | ..... |
| May 9, 1933 | Cut 20 | ..... | ..... |
| May 22, 1933 | Up 10 | ..... | ..... |
| June 19, 1933 | Up 10 | Up 19 | ..... |
| June 26, 1933 | Up 10 | ..... | Up 9-12 |
| July 6, 1933 | Up 13 | Up 10 | ..... |
| July 17, 1933 | Up 15 | ..... | ..... |
| July 28, 1933 | Up 15 | ..... | ..... |
| August 11, 1933 | Up 10 | ..... | ..... |
| August 24, 1933 | ..... | Up 10 | ..... |
| August 30, 1933 | Up 15 | ..... | ..... |
| September 6, 1933 | Up 10 | Up 10 | Up 15 |
| September 8, 1933 | ..... | Up 15 | ..... |
| May 1, 1934 | Up 10 | ..... | ..... |
| November 6, 1934 | Cut 25 | ..... | ..... |
| December 6, 1934 | Cut 25 | ..... | ..... |
| January 4, 1935 | Up 15 | ..... | ..... |
| February 4, 1935 | Up 15 | ..... | ..... |
| May 16, 1935 | Cut 15 | ..... | ..... |
| June 26, 1935 | Cut 15 | ..... | ..... |
| July 16, 1935 | Cut 10 | ..... | ..... |
| August 29, 1935 | ..... | ..... | Revised |
| September 6, 1935 | Up .05 | ..... | ..... |

* All gravities—flat rate.

## CRUDE PRODUCTION TAXES

Oklahoma—Five percent of grass value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅜ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

## CALIFORNIA

**(All gravities above those quoted take lowest price offered in that field)**
**Effective August 29, 1935**

| Gravity | Signal Hill | Seal Beach Alamitos Heights | Huntington Beach | Inglewood | Playa Del Rey[1] | Olinda-Brea Canyon | Athens Rosecrans Domingues | Elwood Terrace[2] | Torrance | Richfield | Whittier La Habra | Montebello | Coyote Hills | Santa Fe Springs | Newhall McKittrick Kern River | Mountain View | Midway Sunset Elk Hills Buena Vista Hills | Lost Hills | Coalinga | Wheeler Ridge |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9 | $.65 | $.65 | $.65 | $.65 | $.65 | $.65 | .... | .... | $.65 | $.65 | $.65 | $.65 | $.65 | .... | $.57 | $.57 | $.57 | $.57 | $.57 | $.57 |
| 15-15.9 | .65 | .65 | .63 | .63 | .61 | .63 | .... | .... | .63 | .63 | .63 | .63 | .63 | .... | .57 | .57 | .57 | .57 | .5 | .57 |
| 16-16.9 | .63 | .63 | .61 | .61 | .58 | .61 | .... | .... | .61 | .61 | .61 | .61 | .61 | .... | .57 | .57 | .57 | .57 | .57 | .57 |
| 17-17.9 | .61 | .61 | .59 | .59 | .55 | .59 | .... | .... | .59 | .59 | .59 | .59 | .60 | .... | .57 | .57 | .57 | .57 | .57 | .57 |
| 18-18.9 | .60 | .60 | .57 | .57 | .52 | .57 | .... | .... | .58 | .57 | .57 | .58 | .59 | .... | .57 | .57 | .57 | .57 | .57 | .57 |
| 19-19.9 | .58 | .58 | .55 | .56 | .49 | .56 | .... | .... | .57 | .56 | .55 | .57 | .58 | .... | .57 | .57 | .57 | .57 | .56 | .56 |
| 20-20.9 | .57 | .57 | .53 | .55 | .46 | .55 | .... | .... | .56 | .55 | .54 | .56 | .57 | .... | .... | .57 | .57 | .57 | .55 | .55 |
| 21-21.9 | .56 | .56 | .52 | .54 | .43 | .54 | .... | .... | .55 | .54 | .53 | .55 | .56 | $.57 | .... | .56 | .56 | .56 | .54 | .54 |
| 22-22.9 | .55 | .55 | .51 | .53 | .40 | .53 | .... | .... | .54 | .53 | .52 | .54 | .55 | .56 | .... | .56 | .56 | .56 | .53 | .53 |
| 23-23.9 | .54 | .54 | .50 | .52 | .39 | .52 | $.55 | .... | .53 | .52 | .51 | .53 | .54 | .55 | .... | .55 | .55 | .55 | .52 | .52 |
| 24-24.9 | .53 | .53 | .49 | .51 | .38 | .51 | .54 | .... | .52 | .51 | .50 | .52 | .53 | .54 | .... | .54 | .55 | .54 | .51 | .51 |
| 25-25.9 | .52 | .52 | .48 | .50 | .37 | .50 | .53 | .... | .51 | .50 | .... | .51 | .52 | .54 | .... | .53 | .54 | .54 | .50 | .50 |
| 26-26.9 | .51 | .51 | .47 | .49 | .36 | .49 | .52 | .... | .50 | .49 | .... | .50 | .51 | .53 | .... | .52 | .53 | .53 | .. | .... |
| 27-27.9 | .50 | .50 | .46 | .48 | ... | .48 | .51 | .... | ... | .48 | .... | .... | .50 | .52 | .... | .51 | .52 | .53 | .. | .... |
| 28-28.9 | .49 | .49 | .45 | .47 | ... | .47 | .50 | .... | ... | .47 | .... | .... | .49 | .51 | .... | .50 | .51 | .52 | .. | .... |
| 29-29.9 | .48 | .48 | .44 | .46 | ... | .... | .48 | .... | ... | .46 | .... | .... | .48 | .50 | .... | .49 | .50 | .51 | .. | .... |
| 30-30.9 | .47 | .47 | .43 | .45 | ... | .... | .46 | .... | ... | Kettleman Hills | | | .47 | .49 | .... | .48 | .49 | .50 | .. | .... |
| 31-31.9 | .46 | .... | ... | .44 | ... | .... | .45 | .... | ... | | | | .46 | .48 | .... | .47 | .48 | .. | .. | .... |
| 32-32.9 | .. | .... | ... | .43 | ... | .... | .44 | .... | ... | | | | .45 | .47 | .... | .46 | .47 | .. | .. | .... |
| 33-33.9 | ... | .... | ... | ... | ... | .... | .... | $.50 | ... | | $.62 | | .44 | .46 | .... | .45 | .46 | .. | .. | .... |
| 34-34.9 | ... | .... | ... | ... | ... | .... | .... | .49 | ... | | .61 | | .43 | .45 | .... | .... | .... | .. | .. | .... |
| 35-35.9 | ... | .... | ... | ... | ... | .... | .... | .48 | ... | | .60 | | | .44 | .... | .... | .... | .. | .. | .... |
| 36-36.9 | ... | .... | ... | ... | ... | .... | .... | .47 | ... | | .59 | | ... | .43 | .... | .... | .... | .. | .. | .... |
| 37-37.9 | ... | .... | ... | ... | ... | .... | .... | .46 | ... | | .58 | | ... | .42 | .... | .... | .... | .. | .. | .... |
| 38-38.9 | ... | .... | ... | ... | ... | .... | .... | .... | ... | | .57 | | ... | .41 | .... | .... | .... | .. | .. | .... |
| 39-39.9 | ... | .... | ... | ... | ... | .... | .... | .... | ... | | .56 | | ... | .... | .... | .... | .... | .. | .. | .... |

[1] Subject to Field Gathering Charge of 5 cents per barrel.
[2] F.O.B. Ship.

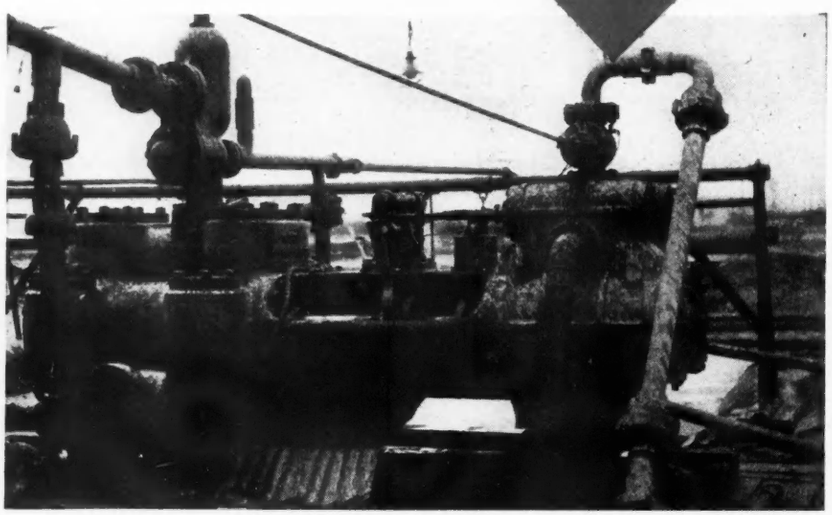
*Centralized*

**SLUSH PUMP CONTROL**

**from the derrick floor**

**KEROTEST**

**STEAM THROTTLE VALVES**



Note how easy it is to control your slush pump right from the derrick floor with Kerotest Steam Throttle Valves—no need for the operator to run down to the pumps when valve action is necessary.

Kerotest Quick Opening Throttle Valves are equipped with universal joint on stem for extension to the derrick floor providing instant control of the flow of steam to the pumps.

These Kerotest Throttle Valves are perfectly balanced and easy to operate against 350 pounds steam pressure—assure unobstructed passage for steam and do not wiredraw.

See it at your nearest supply store or write for descriptive literature.

**KEROTEST MANUFACTURING CO.**

★ ★ PITTSBURGH, PENNA. ★ ★

## TEST IS STARTED

### First of six Venezuelan wildcats now drilling

CREOLE PETROLEUM CORPORATION, Venezuelan drilling subsidiary of Standard Oil Company of New Jersey, has started drilling the first of six tests at El Lirial on Pantepec Petroleum Company of Venezuela's concession 30 miles southeast from Quirequire field in the State of Managua, according to an official announcement.

The portion of Pantepec Petroleum Company's concessions turned over to Creole Petroleum Corporation for the six-well development schedule has been subjected to intense geological geophysical work, and production is definitely expected.

Referring to that portion of Venezuela in which the State of Managua is located, W. F. Buckley, president of Pantepec Petroleum Company, is quoted as saying, "Eastern Venezuela has developed substantial production in the past few years, and the aggressive work now under way indicates it is likely to be an important source of world supply in the near future."

Total concessions of Mr. Buckley's organization in Venezuela amount to around 1,600,000 acres, and that part involved in the development agreement with Creole Petroleum Corporation in Managua totals about 1,000,000 acres. The six wells to be drilled on this concession must each go to 4000 feet, providing important commercial production is not encountered above that depth. It has been estimated the first six wells, including incidental expenses, will cost around $2,000,000, or about $333,333 per well.

Upon completion of the initial drilling campaign, Creole Petroleum Corporation has option of three courses of action: (1) Turn the property back to Pantepec Petroleum Company free of debt; (2) Agree upon a 50-50 partnership with Pantepec Petroleum Company and agree to drill 14 more wells without cost to Pantepec; or (3) Assume two-thirds ownership of the property and agree to drill 34 more wells at its own expense.

Due to the large amount of time and money already spent by Creole Petroleum Corporation in preliminary work, it is not likely the first of these alternatives will receive serious consideration. In other words, it is felt that Creole Petroleum Corporation will eventually be either half owner of the El Lirial concession production or two-thirds owner.

As previously mentioned, El Lirial lies about 30 miles southeast of Creole Petroleum Corporation's Quirequire field, which in turn is near the city of Maturin, district of Piar. Quirequire's structure trends north 70 degrees east. Tertiary production there comes from sands found at from 1500 to 3000 feet, the main producing horizon being the Llanos, yielding 16 degree gravity, A.P.I., asphalt base oil. The average depth of completions in Quirequire runs about 2780 feet, and the productive area of the field January 1, 1934, was estimated at 2210 acres.

# WORLD DEVELOPMENTS and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

## CANADIAN WILDCATS

### Nine Saskatchewan areas being tested by drilling

Nine important wildcat areas in the Province of Saskatchewan, Dominion of Canada, are being subjected to exploratory drilling by operators looking for gas, or oil and gas production in commercial quantities.

A letter to THE OIL WEEKLY from E. Swain, supervisor of mines of the department of natural resources of Saskatchewan, summarizes recent developments in the province.

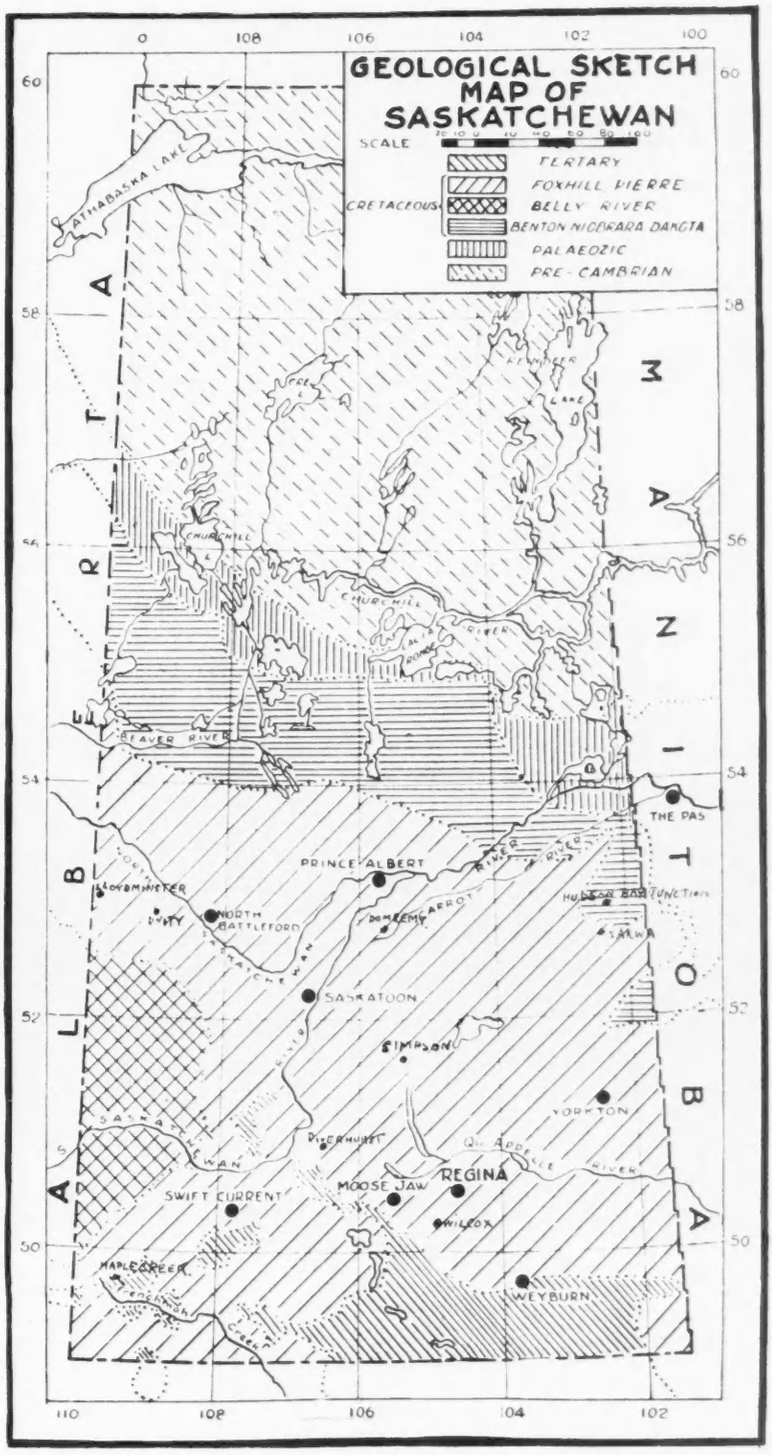
At Hudson Bay Junction, Trail Blazer Oil & Gas Company, Ltd., drilled one well to 1200 feet without encountering commercial production, although a thick, heavy, viscous substance carrying oil was found. The well has been plugged, but arrangements have been made to drill a second well in the area. It will be on a location five miles north of the plugged test.

In the Kakwa area, regarded generally as the southern part of the Hudson Bay Junction area, a deep test was started in October by Petroleum Engineering Company, Ltd. This operator previously had drilled six preliminary tests, most of them to a gas and water sand encountered at about 275 feet.

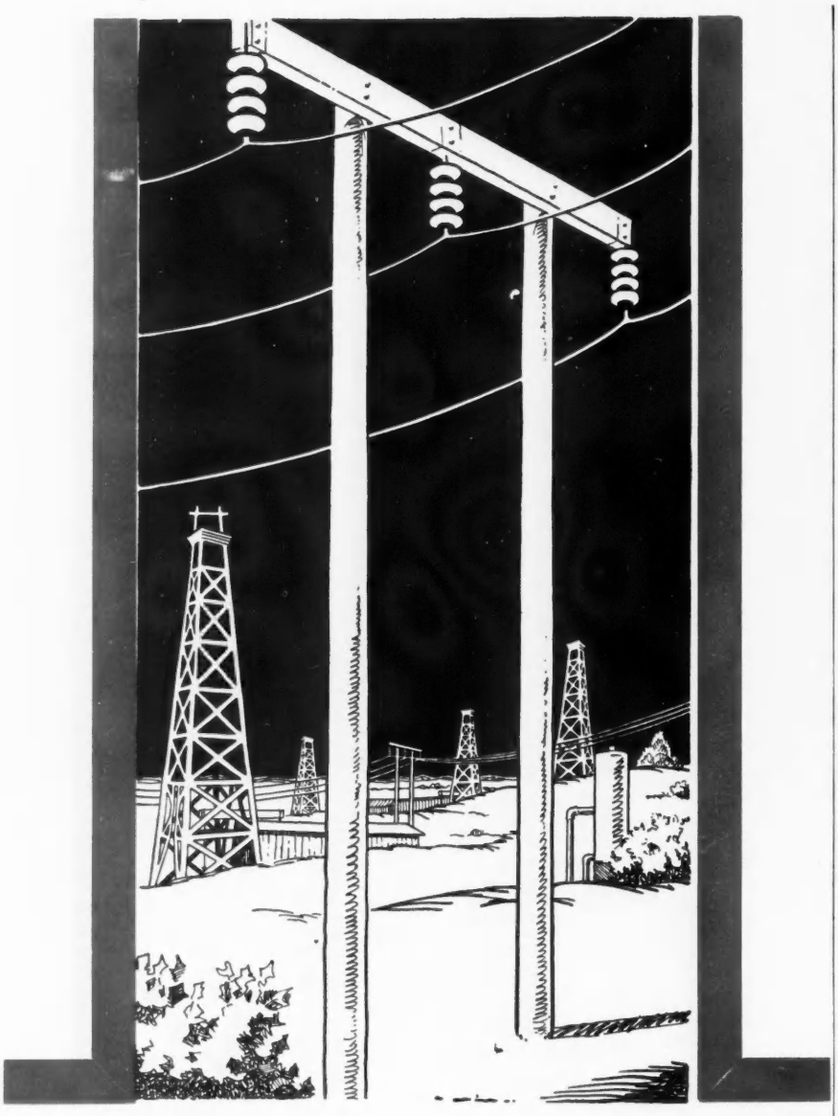
Domremy, located about midway between the Lloydminster area and the Hudson Bay Junction area and due south of Prince Albert, has two tests being drilled by Prince Albert Syndicate, which has reported no showings of commercial importance.

About 35 miles east and a little south of Lloydminster, which is located on the western boundary of Saskatchewan, Vera Oilfields, Ltd., has three tests which cemented off apparently commercial gas sands in an effort to find oil horizons at greater depths. It is likely official announcement of the abandonment of the three will be made soon. At any rate, a fourth well is being drilled to utilize gas from the 1500-foot horizon.

Lloydminster, Saskatchewan's newest commercial gas field, now has four completions to its credit. Of these, three are producers, one with an open flow capacity of 18 million cubic feet




**Base map from "Natural Resources of Saskatchewan", by W. H. Hastings, with areas active in oil and gas drilling projects drawn in by E. Swain, supervisor of mines**



# A Tribute to Oil Men

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## PETROLEUM ELECTRIC POWER CLUB

per day, belonging to Lloydminster Gas Company, Ltd., discoverer of the field, the other two being property of Colony Oil & Gas Company. The latter's wells are rated at 42.6 million and nine million cubic feet, respectively. Two drilling rigs are running in Lloydminster field.

Simpson Oil & Gas Company, Ltd., did not find oil or gas in commercial quantities at Simpson, but developed a salt producer at 3420 feet. The product is being pumped from the well and marketed. The operator has moved the rig one mile east of the salt well for location of the second test, now being drilled.

Riverhurst area, about 40 miles northwest of Moose Jaw and 40 miles northeast of Swift Current, has a drilling test scheduled to go to 3500 feet. In this area Riverhurst Oil & Gas Company, Ltd., has drilled four geological test wells to a gas horizon found at 520 feet.

South of Wilcox, near the contact of the Tertiary and the Foxhill-Pierre, Blackfoot Oil & Gas Company, Ltd., is scheduled to spud soon on a location regarded as very favorable by the chief geologist of that organization. Three years ago a large diameter test was drilled to 1750 feet in this vicinity, but was abandoned due to casing conditions. Petroleum Engineering Company also is interested in the Wilcox area.

At Maple Creek in the southeastern corner of the province, Twin Provinces Oil & Gas Company, Ltd., has made arrangements to drill six miles south of a test abandoned at 2100 feet after recording good showings of gas.

## COLOMBIA

Colombian Petroleum Corporation's Oro 2, wildcat scheduled to go to 4000 feet on the northern part of the Barco concession held by the above Colombian subsidiary of Gulf Oil Corporation, is reported to have encountered several showings of oil at various depths above 2300 feet, where the wildcat was reported recently to be drilling. This wildcat is located on the Rio de Oro structure.

On a dome south of La Petrolea structure in the southern part of Barco concession, the same operator has found oil with a heavy gas pressure at 1300 feet in a wildcat recently drilled. This wildcat is three miles south of the nearest of three producers completed by the Gulf subsidiary.

## HUNGARIAN TESTS

Reports emanating from Mihalyi in Hungary indicate a number of new tests will be started immediately to determine if the gas field recently discovered there by "Eurogasco" is not in reality an oil field. Hopes for oil below the depth from which gas is produced is based on slight traces of oil encountered in a 1600-meter (5248-foot) test. It was not made clear in the reports whether the oil traces were just plain oil traces found independent of other substances, or whether they were taken for granted as a result of occurrence of gas which was five percent methane.

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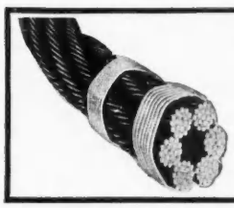

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# *Wildcat Oil Well*

## GRANT COUNTY TEST FLOWS BY HEADS DESPITE MUD

WEEKLY STAFF REPORT

**Tulsa.** — Overshadowing everything else in Oklahoma this week was the discovery of oil in the Helmerich & Payne, Inc., and associates Crouse 1, C NE SW 29-25-8w, near the town of Nash in southwestern Grant County.

Drilled to 6684 feet, 36 feet in the second Wilcox sand, a core showed a salty tasting sand, and being in a three-inch hole, operators decided to quit. The contractor was busy salvaging the upper casing, and at 4443 feet set off a light shot to loosen the pipe. Exactly 1500 feet of pipe had been removed from the hole when a flow of oil, mud, water and gas occurred. The source of the flow was not determined accurately but was believed to be from the Tonkawa series at 4510 to 4600 feet, and in which the crew had a difficult time when the hole was drilled originally. Plenty of mud was dumped into the hole to keep the flow down, but 13 hours later it headed again and after cleaning the hole of mud, put better than 20 barrels of high gravity oil into the pit. The flow was 70 feet up the derrick and a light wind drenched the farm land about the wildcat rig.

More mud was poured into the hole and about six hours afterwards it flowed again, cleaning the hole and putting 40 barrels of oil into the pit. This time the crew shut the well in for orders.

Conferences with geologists and engineers of Stanolind Oil & Gas Company, Amerada Petroleum Corporation, Margay Oil Corporation, and other firms interested in the community developed a plan to have the crew set a bradenhead between the eight- and 15-inch strings of pipe, install a control head and keep it under control until the hole could be reconditioned to make an accurate test of the producing sand, somewhere from 4000 to 4600 feet. Belief that the oil may be from the Wilcox was discounted for the first Wilcox sand from 6615 to 6680 feet and the second from 6648 to 6684 feet yielded nothing.

Keen interest among Oklahoma oil men has been aroused in the showing and many forecast that it will lead to the opening of a major field somewhere in Grant, Alfalfa and Garfield Counties.

Nearest production is in the Garber field of Garfield County, for the Deer Creek field of northeastern Grant County, is exhausted.

To the west is Tex-O-Kan Oil Company's Acre 1, C SW NE 14-24-11w, between McWillie and Helena, Alfalfa County, and now drilling below 6587 feet in a lime, and in a new hole. Considerable excitement took place at this test when it encountered a black shale at 6527 to 6529 feet, causing many to declare it Chattanooga shale, which would have indicated it was running high, but at 6530 feet it reentered Mississippi lime.

Gypsy Oil Company has tubed its Cisco lime discovery well in the Humphreys pool of eastern Jackson County, Boucher 1, NW SW SW 32-1n-19w, in the pay from 2594 to 2607 feet, and its flow came back to 350 barrels a day after previously declining to 90 barrels a day.

In the Altus pool, C. W. Cole and J. T. Nick are starting Cole 1, SE SW SW 34-2n-20w, one-quarter of a mile west of Petroleum Producers, Inc., Cole 1, pumping from Kelley granite wash at 1550 feet.

Operators are planning a general deepening from the Kelley granite wash to the Cisco lime level.

The Kendrick area to the northwest of Stroud in east-central Lincoln County, is to be given a pair of interesting wildcat tests. Fred McDuff has begun pits for Jacobs 1, NEc SE 10-15-5e. It is one half-mile north of two Bartlesville sand gas wells drilled in 1927 and still producing. Rotary tools were used and showings in Cleveland and Prue sands passed up. Those sands along with the Bartlesville will be tested.

White Rock Petroleum Company's Young 1, NWc 23-15-5e, spudded some time ago and shut down to cure titles, is being taken over by Joe. Trigg, Oklahoma City, and he will start up shortly.

## McINTOSH TEST

**Tulsa.**—The belief of many Oklahoma oil men that McIntosh County offers possibilities for a large oil development will be determined as Indian Territory Illuminating Oil Company announced it was staking location for Dicie Taylor, SWC NW SE 9-9n,14e, near the little town of Raiford, and west of Eufaula on a 10,000-acre block. Contract calls for a 4,500-foot test to the Wilcox sand.

It may force some early development in northwestern Pittsburgh County, to the south. Both McIntosh and Pittsburg Counties are pretty tightly leased today.

Near Savanna, in Pittsburg, Vaughan Producing Company Chunn 1-B, NE SE NW 29-4n-14e, is making hole after spudding a fortnight ago. It is a Dallas, Texas, concern.

In northeastern Atoka County, R. H. Pierce, Inc., et al's Aetna Life Insurance Company 1-A, NW SW NE, 10-1n-13e, had good show of oil at 1122 to 1134 feet, and stopped at 1222 feet, when acid bottle showed the hole five degrees off vertical.

## EDMOND POOL

**Oklahoma City.**—Marathon Oil Company Dahl 8, SWc SE 31-14-3w, in the heart of the Edmond pool of northern Oklahoma County, in the Wilcox sand to 6721 feet, was acidized and on its four-hour potential test made 411 barrels to get a rating of 2469 barrels along with 11,664,100 feet of gas.

Marathon's Rankin 1, SEc SW Section 31, stopped at 6714 feet, and flowed 782 barrels natural in 12 hours and will deepen.

Marathon's Keefer 2 Account 1, SW NW NW 5-13-3w, bailed down to 6720 feet, total depth, and filled up 400 feet with oil, and has been acidized with 3000 gallons.

## OKLAHOMA

### Completions

| Company, Well and Location | Bbls. Init. Prod. | | Depth |
|---|---|---|---|
| BRYAN COUNTY— | | | |
| Trio Oil Co.'s Gilbert 1, sw se sw 25-8s-7e | | * | 939 |
| CADDO COUNTY— | | | |
| Lee et al's Stacey Ferrell 1, sw ne ne 3-6n-13w | | * | 2506 |
| CREEK COUNTY— | | | |
| Marathon Oil Co.'s Bishop 1, sw nw sw 13-17n-8e (otd 2303) (pb 2788) | 10 | | 2872 |
| Kirchmer et al's Fry 1-A, sw ne se 14-17n-8e (otd 2295) | 12 | | 2766 |
| Shell Creek Oil Corp.'s Fry 1-A, se nw sw 14-17n-8e (otd 2296) | 12 | | 2845 |
| Sinclair Prairie Oil Co.'s Rector 47, cwl nw se 6-18n-7e (otd 2530) | 35 | | 2574 |
| Commercial Drlg Co.'s Murrell 4, ne ne sw 17-19n-9e (otd 1198) | 5 | | 2269 |
| J. A. Green's Grayson 6, nw nw se 17-19n-9e | | * | 1224 |
| T. E. Mann's Rentie 2, nw se se 32-19n-9e (otd 2403) | 75 | | 2983 |
| HUGHES COUNTY— | | | |
| Manahan Oil Co.'s Dixon "C" 1, sw nw ne 12-9n-8e | 151½-210 | | 1765 |
| Manahan Oil Co.'s Oliphant "A" 1, nw nw se 12-9n-8e | 140 | | 1740 |
| Potco Oil Co.'s McCaslin 2, se nw nw 12-9n-8e | 85 | | 1734 |
| JACKSON COUNTY— | | | |
| Gypsy Oil Co.'s Boucher 1, nw sw sw 32-1n-19w | 147 | | 2607 |
| Gypsy Oil Co.'s Eley 1, sw se se 10-1n-20w | 15 | | 1520 |
| Manson's Minor "A" 1, nw ne ne 15-1n-20w (otd 1456) | 15 | | 1533 |
| Manson et al's Minor "A" 2, ne ne ne 15-1n-20w | 115 | | 1514 |
| JOHNSTON COUNTY— | | | |
| Neff & Godfrey's Everetts 2, cel sw sw 20-4s-6e | | * | 253 |
| KAY COUNTY— | | | |
| Lewis Prod Co.'s Hollenbeck 1, se ne se 18-27n-2e | | * | 3616 |
| LOGAN COUNTY— | | | |
| Stanolind O&G et al's Lee 1, cnw nw 3-19n-2w | 306 | | 5110 |
| Phillips Pet. Co.'s Pfeiffer 1, cne ne 4-19n-2w | 282 | | 5157 |
| Gypsy Oil Co.'s Pfeiffer 1, csw se 33-20n-2w | 785 | | 5139 |

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| NOBLE COUNTY— | | |
| Atlantic Oil Co. et al's Strom 1, cne se 8-20n-1w | * | 5297 |
| OKLAHOMA COUNTY— | | |
| Phillips Pet Co.'s Troy 2, se sw ne 26-12n-3w | abd. | lcn. |
| Slick-Urschel et al's Zieliny 1, ne ne sw 29-13n-3w (pb 6850) | * | 6931 |
| Pure Oil Co.'s Malum 2, nw ne sw 30-14n-3w | ¶45¾-5018 | 6700 |
| Marathon Oil Co.'s Dahl 7, sw nw se 31-14n-3w | ¶125½-13,423 | 6690 |
| OKMULGEE COUNTY— | | |
| Anderson & Kerr's Sullivan 1-A, se se se 5-12n-12e | lcn. | abd. |
| McCurry's Colbert 1-A, cse ne 14-14n-14e | 10 | 1067 |
| Downing's Colbert 3-A, sw ne nw 1-15n-14e | 50 | 1353 |
| OSAGE COUNTY— | | |
| Lewis Prod Co.'s 11, se nw nw 21-24n-7e | 320 | 2694 |
| Lewis Prod Co.'s 7, ne nw ne 28-24n-7e | 163 | 2737 |
| Barnsdall Oil Co.'s 2, ne nw ne 23-24n-10e (otd 1848) (pb 1990) | 40 | 2226 |
| Enterprise Transit Co.'s 5, nw ne ne 34-26n-6e | 934 | 2980 |
| Winona Oil Co.'s 1, sw sw ne 15-28n-10e | * | 1240 |
| PONTOTOC COUNTY— | | |
| Skelly Oil Co.'s Smith 1, ne ne ne 35-2n-6e | ¶2¼-4312 | 4487 |
| Amerada Pet Corp.'s Smith 2, ne sw nw 28-2n-7e (otd 4187) | 4131 | 4321 |
| Moore's Schauers 4, se sw nw 29-2n-7e (otd 4207) | 4264 | 4332 |
| Moore's Wirick 5, sw sw se 29-2n-7e (otd 4044) | 4377 | 4307 |
| Carter Oil Co.'s Smith 3, sw ne ne 31-2n-7e | ¶4½-1488 | 3995 |
| Mary F Oil Co et al's Robertson 2, cwl e½ nw 22-5n-8e | * | 807 |
| POTTAWATOMIE COUNTY— | | |
| Barnsdall Oil Co.'s Lawery 1, sw nw nw 29-8n-4e (otd 4371) | * | 4791 |
| SEMINOLE COUNTY— | | |
| Radial Oil Co.'s Huddleston 1, nw nw sw 19-5n-6e | 100 | 2570 |
| Reynolds' Fleet Bros 1-A, se nw se 13-6n-7e | 45 | 2830 |
| Magnolia Pet Co.'s Dindy 6, se se nw 11-7n-6e | ¶11-106 | 3127 |
| Malarnee's West Estate 1, se se nw 33-7n-6e | 50 | 2560 |
| Carter Oil Co.'s Dunaway 1, cw½ nw sw 11-10n-6e | 1760 | 4173 |
| STEPHENS COUNTY— | | |
| Green's Myrtle Green 3, ce½ ne ne se 27-1s-5w | 10 | 934 |
| Skelly Oil Co.'s Harmon 10, se ne ne 27-1s-5w | 7 | 676 |
| Raizen Bros' Brown 16, ne nw se 2-2s-5w | 4 | 661 |
| Brown 17, se nw se 2-2s-5w | 2 | 677 |
| Daphine Oil Co.'s Layne 1, se sw sw 1-1s-4w | lcn. | abd. |

*Failures; †Junked; ¶Million cu. ft. gas.

## 49 NEW STARTS

**Tulsa.**—A trivial decline in new field work for Oklahoma was revealed in the week just ended. Forty-nine first reports were found in 18 counties, compared with 50 from 17 counties the previous week. Pontotoc County was ahead with 13; Osage six; Seminole, four; Carter, Creek, Oklahoma, Pottawatomie and Stephens, three each; Lincoln, two, and Hughes, Jackson, Jefferson, Johnston, Logan, Noble, Okfuskee, Okmulgee and Wagoner, one each.

While completions totalled but 51, Oklahoma's potential production was increased when 38 new oil wells registered a 24 hour output of 42,862 barrels, compared with 55 completions the week previous; 31 oil wells doing 39,234 barrels initial. Ten dry holes and three abandoned locations completed the summary.

Of the completions, two wildcat oil wells made 247 barrels and cut 5,177 feet of hole, and five wildcat failures drilled 12,611 feet of hole.

## INCREASED ACTIVITY

### Thirty completions in Kansas the past week

WEEKLY STAFF REPORT

**Wichita.**—First townsite test to find oil and thus enlarge the Oxford pool of Sumner County is Shell Petroleum Corporation's Buffington 1, completed for 584 barrels a day in the "mixed zone" at 2947 feet, after acidizing.

A marked increase in completions took place in Kansas. Thirty tests were finished. Sixteen new oil wells had an initial flow of 22,708 barrels, while one gas well made 55,000,000 feet. Eight dry holes and five abandoned locations finished the summary. The 25 tests that actually drilled cut 54,441 feet of hole. One wildcat oil well to 1509 feet, made 45 barrels; four wildcat dry holes accounted for 11,372 feet, and three old wells drilled deeper added 1158 feet of new footage to the total, while the 17 others made 51,774 feet of hole.

Russell County, where 19 pools have been found, led Kansas areas in new field work the past week. Five first reports came from that county, with Rice, four; Sumner, three; McPherson, two, and Cowley, Ellis, Ellsworth, Grant, Reno, Sedgwich and Stevens, one each.

Most westerly drilling well in Kansas today is Alma Petroleum Corporation and Robert McNeely's Watchorn 1, C SW NE 13-15s-33w, southeast of Russell Springs, in Logan County. They were below 5050 feet. They had Mississippi lime at 4472 feet.

## KANSAS
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BARTON COUNTY— | | |
| Suppes & Witts' Hayes 1, nw nw nw 7-16s-15w | * | 3534 |
| BUTLER COUNTY— | | |
| Sheldon & Wixon's Dohern 1, nw nw ne 11-25s-3e | 96 | 2722 |
| ELLSWORTH COUNTY— | | |
| Bradley Oil Co.'s Mahoney 7, sw sw se 14-17s-9w | 1470 | 3180 |
| Carter Oil Co. et al's Teubner 2, ce½ e½ nw 26-17s-9w | 1596 | 3186 |
| Franco-Central Oil Co. et al's Frevert 1, sw sw sw 8-17s-10w (pb 3346) | * | 3355 |
| Keith et al's Schepman 1, sw sw nw 22-17s-10w | * | 3375 |
| GREENWOOD COUNTY— | | |
| Moore Oil Co.'s Pixlee 3, cs½ se ne 7-22s-10e | 110 | 2333 |
| McGinnis' Shook 2, nw ne se 31-23s-12e | * | 1884 |
| Bennett & Abel's Grabham 1, se se ne ne 35-25s-10e | 25 | 1985 |
| Reynolds et al's Marhanke 1, sw ne se 34-25s-11e | 20 | 1868 |
| Hollis Bros.' Kolb 1, se nw ne 15-25s-13e | 50 | 1491 |
| HARVEY COUNTY— | | |
| Selby Oil Co.'s Sperling 2, ne se se 14-22s-2w | lcn. | abd. |
| Empire O&G Co.'s Froese 1, se se se 7-22s-3w (otd 3556) | 51 | 3607 |
| MARION COUNTY— | | |
| Harwood Oil Co. et al's Cowman 6, se se sw 11-17s-4e | * | 2410 |
| McPHERSON COUNTY— | | |
| Brosius et al's Hanson 1, ne ne sw 15-17s-2w | * | 1108 |
| Roth & Farrout's Alman 5, nw sw se 13-19s-3w (pb 3005) | 35 | 3010 |
| Almen 6, sw sw se 13-19s-3w | 55 | 2360 |
| OSAGE COUNTY— | | |
| Edward's Wetrick 1, cnw se 21-14s-15e | * | 800 |
| RICE COUNTY— | | |
| C. B. Davis et al's Deuser 5, se se sw 31-19s-10w | 1166 | 3295 |
| Gypsy Oil Co.'s Wendell 1, nw nw se 32-19s-10w | 1428 | 3305 |
| Jones & Thurman Oil Co.'s Dewitt 1, se sw se 9-20s-9w | lcn. | abd. |
| Hurd's Wright 1, ne ne ne 33-21s-19w | lcn. | abd. |
| RUSH COUNTY— | | |
| Boyle & Grossman's Wilson 1, ne ne ne 33-17s-19w | lcn. | abd. |
| Schermerhorn Oil Co.'s Mageljantz 1, cse ¼ 11-18s-16w | ¶55 | 3523 |
| SUMNER COUNTY— | | |
| Amerada Pet. Corp. & Sunray Oil Co.'s Gassaway 3, csl se sw 14-32s-2e (otd 2101) | 15,781 | 2899 |
| Lario O&G Co. & Barnsdall Oil Co.'s Weinrich 2, ne ne nw 23-32s-2e (otd 2100) | 730 | 2409 |
| Washoma Pet. Co.'s Peter 1, nw nw se 23-32s-2e | lcn. | abd. |
| WOODSON COUNTY— | | |
| Sheedy et al's Aikens 5, sw ne se 19-25s-14e | 50 | 1481 |
| DeGenther et al's Rupp 1, nw nw nw 20-25s-14e | * | 1569 |
| Saco Oil Co.'s Hassenpflug 1, sw nw ne 34-25s-14e | 45 | 1509 |

*Failures; †Junked; ¶Million cu. ft. gas.

## PROPERTY DEAL

**Wichita.**—All the producing properties and 3000 acres of undeveloped leases, all in Russell County, of Signal Oil Company have been sold to W. I. Southern, drilling contractor of Tulsa. News of the sale came from John B. Foster. The financial consideration in cash and future production was said to be around $500,000.

Five wells in the Sellens pool, involving 760 acres of proven leases and 3000 acres of undeveloped acreage, and royalty under 1120 acres, was involved. The five wells have a potential of 1100 barrels a day from the Oswald and Siliceous lime formations.

## WATER FLOODING

**Tulsa.**—Water flooding in the Chelsea area of northeastern Rogers County, and in southern Nowata County, is becoming quite general. Carter Oil Company has established a daily yield of 150 barrels on its Hall lease in 22-24-17e.

Harmon & Whitehill, Inc., Sinclair Prairie Oil Company and Forest Production Company are the other active operators in the use of water drive to extract production left in the ground when wells ceased flowing and pumping failed.

## EMPIRE STOCKS

**Bartlesville, Okla.**—Empire Pipe Line Company advises that its stocks of crude oil on hand October 1 were 4,427,589.73 barrels, compared with 4,618,681.57 barrels on September 1. During September it received into its lines 1,878,681.43 barrels a day or 62,622.71 barrels, and delivered to its refineries or purchasers 2,069,773.07 barrels, or 68,992.44 barrels a day.

# *Few Completions*

## EAST TEXAS WORK REMAINS LOW DURING PAST WEEK

WEEKLY STAFF REPORT

**Tyler.** — Approval of approximately 600 permits by the Texas Railroad Commission within the past six weeks for the drilling of additional wells in the East Texas is not being reflected by current drilling and completion reports. Completions declined to 50 the past week, including one dry hole, as compared to 61 the previous week. Current drilling reports indicate about 105 rigs in operation.

Uncertainty of the future method of apportioning production allowables between leases and wells in so far as it will affect densely drilled properties is causing most of the operators to hold projected development work in abeyance. Resumption of development work on a large scale hinges on the stand taken by the Texas Supreme Court in regard to petitions filed lately for a rehearing in the case of C. H. Brown et al versus Humble Oil & Refining Company. The Court ruled on June 12, 1935, that the acreage covered by individual leases must be taken into consideration by the commission in allocating proration quotas, and that the granting of exceptions to Rule 37, spacing of wells from property lines, can not be made on tracts subdivided to evade the spacing regulations.

Should the court grant a new hearing on the above case and later reverse its original opinion the drilling of additional wells will be continued by the majority of the operators, regardless of well density, until it is no longer possible to amortize the cost of new wells. In preparation of a resumption of drilling on a large scale independent units have fortified themselves with approval permits totaling 422, while during the same period majors took out permits to drill 188 tests. Independents were denied 80 applications, while five turndowns were credited to majors within the past six weeks.

Independents were credited with 31 of the 50 completions reported the past week, and also completed eight producers that failed to flow as compared to one for the majors.

Sun Oil Company's Ed. W. Barker 3, situated on north line of 77-acre lease, A. M. Ryan Survey, Rusk County, near west edge of production, encountered salt water in Woodbine sand at 3721-22 feet after drilling in with cable tools. It was abandoned after making a swabbing test via 5¾-inch casing. Top of sand was logged at a sub-sea depth of 3339 feet.

Fifteen of the completions reported the past week were drilled on leases that now have a density of one well to five acres or less, and three were credited to majors. W. L. Sartain, San Antonio, and associates completed a flowing producer on the S. G. Smith 7/10-acre lease, Cordova Survey, Rusk County.

Agey Drilling Company, Henderson, has made location for a semi-wildcat to be drilled about one mile east of nearest production in the Joiner area, and in the NWc of the Mrs. J. McWilliams 370.2-acre lease, Juan C. de la Vina Survey.

## DEFINE CAYUGA

### North edge gets failure and poor showing

**Palestine.**—Oil production deadline along the north rim of the Cayuga structure has been further outlined by a poor showing made by one well and the failure of another to yield oil in drilling to the water level. Roeser-Pendleton, Inc.'s Murchison 1, Henderson County, situated on the northwest border, made 85 barrels fluid, showing 15 percent water, in 23 hours after being equipped with a flowing device. It was drilled to a sub-sea depth of 3774 feet. Kirby Petroleum Company's Litchfield 1, a northeast outpost, missed the oil horizon in drilling to 4122 feet, and is preparing to complete as a gasser after plugging back to 4064 feet. Mid-section of the Trinity sand series tested by Tide Water Oil Company and Texas Seaboard Oil Company's Wills 21-A, Cayuga's first deep test, failed to show gas after perforating casing and swabbing at intervals up the hole. It was originally drilled to 9082 feet, then plugged back to 8734 feet, or 16 feet above the seven-inch casing seat. The hole has since been plugged back to the 8500-foot level and the casing perforated to try for gas production in the top portion of the Trinity.

## TESTING GAS LINE

**Palestine, Texas.** — Contractors engaged in building 108.09 miles of 20-inch natural gas transmission line for Lone Star Gas Company from Irving Junction, situated on a line between Dallas and Fort Worth, to the Cayuga and Long Lake fields, Anderson County, were preparing to make pressure tests on the Irving-Cayuga unit late last week. The Cayuga-Long Lake portion of the trunk line system is slated for completion before the close of the month.

## NEW TENDER MEN

### W. J. Christian succeeds Royall in East Texas

**Austin.**—W. J. Christian, newly appointed member of the East Texas Tender Board, has worked for the Railroad Commission in the East Texas field since December, 1931. He will take the place on the board vacated by Tucker Royall, but will not be the chairman. Christian has worked in every office in the department and is thoroughly familiar with conditions. Until recently he has been in charge of the commission personnel in the field, and acted as chief enforcement officer during the time Harry Miles was on his vacation. He was relieved of this work when Captain Stanley was appointed enforcement chief. His most recent post was that of member of the commmission tender committee which does the detail work on all tenders and makes recommendations to the tender board. Before coming with the commission Christian was in charge of offices of a mercantile concern at Burnet, Texas. He held this place for ten years.

## EAST TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| JOINER AREA— | | |
| T. C. Adams et al, Arnold 5 (10-ac) | 5000 | 3730 |
| Nick Barbare & Seip, Lambert 2 (33-ac) | 120 | 3568 |
| Big Indian Synd., Deason 3 (10-ac) | 750 | 3740 |
| Delta Drl. Co., Jackson 3 (25½-ac) | 6800 | 3819 |
| Geo. Despot et al, Deason 2 (3-ac) | 5000 | 3715 |
| Sam Flanz & Joe S. Mellard, Hale 1 (20-ac) | 1000 | 3557 |
| W. H. Grant-Garvin & Wegener, Edwards 5 (52½-ac) | 500 | 3600 |
| Edwards 6 (52½-ac) | 500 | 3620 |
| Gulf, Stone 5 (28.45-ac) | 8000 | 3629 |
| Wiley 12 (116-ac) | 8000 | 3694 |
| Guthrie Oil Corp., Frederick 3-B, Tr. 2 (6.78-ac) | 480 | 3610 |
| W. B. Hinton et al, Mayfield 15 (94-ac) | 3600 | 3758 |
| Illinois Oil Co., Mayfield-Shell 39 (197.1-ac) | 5500 | 3773 |
| D. L. Johnson & Olson Bros., Powers 17 (132-ac) | 9600 | 3699 |
| Marathon Oil Co., Mills 10 (44.37-ac) | 1500 | 3748 |
| Marco O&G Co., Lacey-Pure 2 (50-ac) | 4000 | 3655 |
| Lee 2 (44½-ac) | 4000 | 3671 |
| Roy Riner et al, L. C. Herring 2 (10-ac) | 100 | 3556 |
| Royal Pet. Corp., Moore 2 (14-ac) | 45 | 3573 |
| W. L. Sartain et al, Smith 1 (7/10-ac) | 4500 | 3810 |
| Stanolind-Pure, Siler 58 (983.53-ac) | 64 | 3706 |
| Sun, Pace 22-B (637.45-ac) | 5000 | 3774 |
| KILGORE AREA— | | |
| Erle P. Halliburton, Inc., Hagler-Steen 2 (10-ac) | 7000 | 3624 |
| Humble, Jones Fuller 13 (118.46-ac) | 3600 | 3705 |
| Henry Sexton 30-B (258.6-ac) | 5000 | 3744 |
| Hurricane Pet. Corp., J. C. Bradbury 5 (20-ac) | 7500 | 3645 |
| Hurtle Oil Co., H. Sexton 9-B (53-ac) | 500 | 3656 |
| Magnolia, Hale 7 (50-ac) | 120 | 3575 |

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| Midfield Oil Co., E. Samples 3 (13.8-ac) | 750 | 3716 |
| Royal Pet. Corp., G. C. Gunn 1 (51½-ac) | 75 | 3573 |
| Stanolind-J. E. Crosbie, Powers 11 (90.91-ac) | 1000 | 3699 |
| Sun, Ed. M. Barker 3 (77-ac) | * | 3722 |
| Tide Water, King 17 (81.18-ac) | 5000 | 3603 |
| Triple Oil Co., Montgomery 2 (25.86-ac) | 450 | 3593 |
| Montgomery 3 (25.86-ac) | 550 | 3597 |
| Hugh N. Wilder et al, Thompson 1 (1.24-ac) | 8000 | 3705 |
| LONGVIEW AREA— | | |
| Arkansas F. O. Co., Burnsides 32 (209-ac) | 7200 | 3492 |
| Christian 4 (19.16-ac) | 9000 | 3597 |
| Burke Royalty Co., TP Ry. 1, blk 71 | 8000 | 3575 |
| TP Ry. 1, blk 73 | 8000 | 3580 |
| J. W. Davenport & C. R. Whittington, Richey 1 (2.38-ac) | 7200 | 3537 |
| Empire, Rogers 12 (70.43-ac) | 8500 | 3615 |
| Humble, Killingsworth 13 (99.7-ac) | 6000 | 3646 |
| Mattox 7 (62.41-ac) | 7200 | 3692 |
| Monday Oil Co., Younse 12 (86-ac) | 1000 | 3674 |
| Shell, Slaton 17 (123.65-ac) | 8600 | 3613 |
| Williams 3 (16.23-ac) | 8500 | 3561 |
| C. B. Slemp et al, Tuttle 5 (40-ac) | 5000 | 3718 |
| Sun, Salter 4-B (27.74-ac) | 1000 | 3766 |
| United E&W Oil Co., Walker 7 (62-ac) | 6000 | 3575 |
| LEON COUNTY (Long Lake Field)— | | |
| Tide Water-Texas Seaboard, A. W. Johnson 1 (425.81-ac) | ¶5-50 | 5313 |
| VAN ZANDT COUNTY (Van Field)— | | |
| Cauble & Thompson, C. S. Camper 1 | * | 3361 |
| Humble, C. L. York 8 | 10,000 | 2918 |
| Pure, B. W. Russell 7 | 25 | 2957 |
| LIMESTONE COUNTY— | | |
| Dan H. Daugherty et al, Sallie Welch 1 | * | 3121 |
| NAVARRO COUNTY— | | |
| E. M. Thomason & Co., Inc., T. P. Shivers 1 | * | 1287 |
| Wiggins & Albritton, D. A. Donoho 1 | * | 1439 |

*Failures; †Junked; ¶Million cu. ft. gas.

## WEST TEXAS HEARINGS

**Austin.**—The Texas Railroad Commission has scheduled hearings for three new West Texas fields to be held in Austin on October 31. Included are the Goldsmith field in Ector County, the Waddell-Henderson field in Crane and Ector Counties, and the Keystone field in Winkler County. The commission will at this time consider rules for the spacing, drilling, completion and operation of wells in the field. On the same day a similar hearing on the Long Lake field, Anderson County, will be held. This hearing will involve the establishment of proper gas-oil ratios in the field, and the commission will have under consideration all other conservation rules.

## 228 TEXAS PERMITS

**Austin.**—Permits for drilling 228 new wells in Texas were approved by the Railroad Commission last week, 105 more than were allowed the week before.

The marked increase was attributed in part to the allowance of 59 permits for wells in East Texas. There were 35 in Rusk County, 17 in Gregg County, four in Upshur County and three in Smith County.

Southwest Texas was second among the districts with 41 permits, which included 11 in Duval County. The Gulf Coast reported 34 with 11 in Harris County.

# *Wildcat Has Oil*

## REAGAN COUNTY TEST FILLS 1500 FEET AFTER SHOT

NORTH & WEST TEXAS

WEEKLY STAFF REPORT

**San Angelo.**—Brighter outlook for commercial oil production from dolomite lime zone in southeastern Reagan County loomed the past week when Sun Oil Company's wildcat on the L. Young Wilson 1, SWc NE¼ Section 1, GC&SF Ry. Survey, A-170, filled 1500 feet with 34 gravity oil after shot of 300 quarts of nitro in lime at 2444 feet, or 234 feet above sea level. A bridge formed in hole about 100 feet from the bottom after the shot. Top of brown lime was logged at 2340 feet, and saturated lime was cored at 2380-2416 feet. The well is about 13 miles southeast of the Big Lake field, and two miles north by east of a small pumper recently developed by Dobbs Oil Company's W. E. Friend 1 after using nitro and acid solution in lime at 2325-2450 feet. The hole was plugged back to the latter depth from 2465 feet, or 204 feet above sea level, because of sulphur water. Sun Oil Company holds leases on a large block of acreage in the immediate area.

Development of the 3000-foot lime horizon in the Big Lake field is to be resumed by the Big Lake Oil Company. Activity has been dormant for about five years, except for the drilling of a few deep Ordovician lime tests. University 182, located 1320 feet from south and 500 feet from east lines of Section 11, Block 2, situated on west edge of production, is to be the first of a series of tests projected by the company.

Northwestern Reeves County wildcat of Kenneth Slack and L. M. White on the F. Reeves tract, C SE NW Section 20, Block 56, P. S. L. Survey, about 23 miles southwest of the Wheat field, was scheduled to be given a heavy shot of

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nitro in Delaware lime at 3126-64 feet late last week. The hole has been plugged back from 3205 feet, where sulphur water was encountered in the Delaware sand section. The 38-foot section of lime carried oil saturation that compares favorably in porosity with producers in the Wheat field, the only Delaware lime producing area of any importance in West Texas. The Reeves test topped the Delaware lime at 94 feet above sea level, while the lime is found between 1400 and 1500 feet below sea level in the Wheat field.

Hyman G. Krupp, El Paso, who participated in the discovery of the Big Lake field, is reported to be planning to drill a Delaware lime test in Hudspeth County, where a large block of acreage has been contracted for near the town of Finley.

Trans-Pecos Oil Company, Fort Stockton, Texas, is starting operations on a second wildcat in the extreme west portion of Pecos County in search of production from the Deleware horizon. The new project will be on the Popham Land and Cattle Company 12,000-acre block, near center of SW¼ Section 235, Block 11, GH&SA Ry. Survey, or about 14 miles southwest of the company's C. M. Caldwell 1, SEc Section 27, Block 50, T&P Ry. Survey, Township 9, which is drilling below 4000 feet. Humble Oil & Refining Company acquired leases on five sections last August in the east portion of Block 11, GH&SA Ry. Survey, to enlarge its lease protection in the area in expectation of drilling a test, according to reports. This block centers about 15 miles due north of Floyd C. Dodson et al's Texas American Syndicate 1, C NE NE Section 66, Block 10, GH&SA Ry. Survey, Brewster County. Dodson and associates have contracted to drill a 6000-foot test, but were forced to skid rig at 1715 feet recently because of encountering an underground stream that could not be negotiated with rotary. Geology and geophysical information supporting this projected deep test for Brewster County has enabled the sponsors to raise more cash through acreage sales to majors than any other test now underway in West Texas.

Resumption of work on Honolulu Oil Corporation and C. J. Davidson's L. P. Bennett 1, Yoakum County wildcat that encountered oil from lime section at 5090 feet, or 1533 feet sub sea, on September 28, revealed that the hole is standing about two-thirds full with oil. It was credited with 800 feet of oil when work was halted to perfect titles and move in casing. A string of 7-inch pipe was cemented at 4650 feet. No date has been set for the drilling of cement plugs and a decisive production test of the well. Although this promising wildcat extends production in the Permian Basin about 40 miles to the north, it has not been followed up by an aggressive lease play in the area. However, close in acreage is held mostly by large interests, and buying has centered generally to the south across Gaines County.

Lou G. Stogner et al's C. C. George 1, wildcat near center of north line of Andrews County and about 7½ miles northwest of the Means field, failed to log additional oil saturation of any consequence in progressing to the 4870-foot level, or 1617 feet sub sea. However, no sulphur water has been encountered, thus affording an outside chance for a lower pay. It began showing a little free oil at 4330 feet, and increased saturation at intervals in drilling deeper, but very little change in the fluid level.

Advance of the productive limits of the Keystone area, Winkler County, about two miles to the northwest appeared promising the past week when Sid Richardson et al's B. F. Jenkins-Humble 1, SEc Section 13, Block 77, P.S.L. Survey, began logging oil saturated lime section near the 3360-foot level. Heavy flow of gas in upper lime has been mudded off. Sun Oil Company's J. B. Walton 1, NEc S½ Section 8, Block B-3, logged first anhydrite at 795 feet, and has progressed to 2105 feet. Based on the above geological marker Sun Oil Company's test, which is about 1½ miles west of production, correlates about ten feet higher on structure than the discovery well of the Keystone field. Gulf Production Company's Keystone 4, southwest outpost, failed to respond to 150-quart nitro shot in lime at 3250-3350 feet after plugging back from sulphur water at 3591 feet.

Magnolia Petroleum Company's J. B. Walton 11, situated on the northwest edge of the Sayre field, Winkler County, is ranked among the largest natural producers in establishing a 24-hour potential of 745.17 barrels of oil from sandy-lime section at 2845 feet, or 39 feet above sea-level. Cree and Hoover's J. A. Crow 1, NWc SW¼ Section 14, Block B-5, PSL Survey, located more than one mile southeast of nearest oil production in the Kermit area, cemented casing at 2710 feet after encountering gas near this level. Top of lime was called at 2350 feet.

Sun Oil Company and Atlantic Oil Producing Company's O. B. Holt 1-B, about one mile northeast of a small semi-wildcat producer recently completed by Sun Oil Company on the Holt ranch near north line of Ector County, has progressed to the 3890-foot level, and is checking about 100 feet lower on structure, according to reports. Salt section was logged at 1705-2852 feet, with an elevation of 3135 feet. Continental Oil Company's L. E. Wight 1, located about one mile southwest of nearest production in the North Cowden field, has halted operations at 4457 feet after logging only minor oil showings in the regular producing zone for the area.

Extension of production in the McCamey field, Upton County, several miles to the southeast was attained last week when W. C. Ray, San Angelo, and others' Cordova Union 1, Section 3, Block AB, A. E. Bazley Survey, flowed oil by heads while awaiting arrival of casing from lime at 2060-67 feet. It has an elevation of 2576 feet.

# *Watch Deep Tests*

## WEST TEXAS LOWER ZONES ARE BEING TESTED

**Midland, Texas.**—Holding sixth place among the deep tests drilled throughout the world, Humble Oil & Refining Company's L. W. Pollok-Gulf 1, northeastern Upton County projected Ordovicion lime test, made about 500 feet of hole the past week in drilling to 10,650 feet. This fast drilling time is made possible by a thick shale section in the Pennsylvania lime horizon. The possibilities are considered remote for this wildcat to reach the Ordovician. Geological sections have thickened considerably in this area, as compared to Gulf Production Company's J. T. McElroy 103, record depth test on west edge of Upton County. The latter logged Pennsylvanian at 7500-10,167 feet followed by a 973-foot section of chert and siliceous limestone that required about seven months of continuous drilling to negotiate. This chert section has not appeared in other deep tests in the Permian Basin.

Gulf Production Company's McElroy 103, which was plugged back from 12,786 to 3518 feet was officially completed on October 13 pumping 173 barrels oil in 24 hours from regular dolomite lime zone for the area. Sulphur water was found in the lower section of the Ordovician, which was topped at 11,340 feet.

No new developments transpired the past week on Gulf Production Company's W. N. Waddell et al 1, western Crane County wildcat that led to a major lease and royalty play in the south one-half of the county earlier this month. Trading was based on the reported presence of the Simpson, or top section of the Ordovician series, at about 6060 feet, or 3506 feet sub-sea. The test is about 20 miles east by south of the McElroy ranch record depth well, and a comparison of the Ordovician markers indicates that the Crane County test has uncovered an important geological find. Drilling was in progress at 6185 feet late last week, using 10-pound rotary mud. However, no oil or gas has been encountered, according to reports.

Loffland Brothers, John I. Moore et al's L. S. McDowell 1, Glasscock County, cleaned itself of accumulated fluid on the morning of October 11 after being idle for some weeks at 10,115 feet. The well was purposely left open and connected to lease tanks in anticipation of a flow. It had previously been treated with 6000 gallons of cold acid solution while carrying a limited volume of free oil and gas in the hole, but failed to make a commercial producer after acid treatment. The hole is bottomed in the lower Pennsylvanian, according to reports.

## WILDCAT TO TEST

### Childress County well to test Canyon horizon

**Wichita Falls, Texas.**—Renewed effort is to be attempted by Alma Oil Company, Oklahoma City, to develop production from the Canyon lime zone at 5633-53 feet in plugging back its wildcat on the W. T. Low land, southeastern Childress County, after failing to uncover other promising horizons in drilling to 8223 feet. Identity of the formation at the bottom of the hole was not revealed. The owner plans to plug back to 5730 feet, or at a higher level to make an exhaustive test of the Canyon zone, which produced about 150 barrels of fluid, swabbing daylight periods, including about one-third high gravity oil and the balance water last June. The oil zone was picked up the month previous, and immediately set off a major lease and royalty play, with purchasers generally assuming that the Ordovician lime had been encountered. Childress County is intermediate to the North Texas and Panhandle districts, and the above test establishes a depth record for both.

Encouraged by the showing developed by the Childress County wildcat, Phillips Petroleum Company has assembled a block of about 30,000 acres to the west in Hall County, and is starting work on a projected 6000-foot test on the Annie C. Hughes land, C N½ Section 4, Block H, J. H. Stephens Survey. About 50 percent of the block was donated for the test, which is located about seven miles west of a 5232-foot failure drilled by Rio Bravo Oil Company.

The revived Portwood district, southeastern Baylor County, and multiple shallow sand and lime pools in Cooke County are the principle contributors of new production in North Texas. The Cooke County areas are not so prolific, but in the aggregate afford opportunities for many operators to participate.

The Portwood district, now centering on parts of four sections, stands out as the most prolific oil area uncovered in the district in a number of years, with production coming from 1350-foot oil sand. There are now approximately 90 wells on production, averaging about 43 barrels daily each, and allowables range up to 200 barrels daily each. The record producer was completed last week on the southwest edge of the field when Consolidated Oil Company's W. H. Portwood 8-R, Section 1579, flowed natural at rate of 3300 barrels daily for four hours from sand at 1334-61 feet, and prorated on a basis of 3000 barrels potential. Petroleum Producers Company's Portwood 13-H, east offset to production, partially defined the east edge in failing to pick up sufficient oil sand to make a producer after drilling to 1392 feet.

## EXTEND SUNRAY

### Moore County field gets north enlargement

**Pampa, Texas.**—The original oil producing area in the Sunray district, north central Moore County, was extended about three-quarters of a mile to the north by Shamrock Oil & Gas Company's R. O. C. Brumley-Ryan 1, C SW NE Section 168, Block 3-T, T&NO Ry. Survey, developing a natural flow of 15 barrels of oil hourly from dolomite lime at 3320-3336 feet. Gas volume is rated at 6,000,000 cubic feet daily, although an estimated flow of 125,000,000 cubic feet of dry gas was cased off in cementing 5 3/16-inch pipe at 3307 feet. A. D. Morton & Company's W. H. Reeder 1 uncovered the 3300-foot lime horizon in June, 1927, but was delayed in obtaining market relief. It was later completed for a small flowing well. Other wells in the immediate area proved likewise, and later development has since centered on extensions to the northeast and southwest.

In all probabilities this new producer will lead to the eventual linking of the two extension areas, with oil production limited to the rim of a huge "lime high" that carries big gas production.

Magnolia Petroleum Company holds lease on 80-acres to the west of the producer, and will probably make a location shortly. Gulf Production Company has farmed out a number of tracts to the north on an over-riding royalty basis to Shamrock Oil & Gas Company. Anderson-Kerr Petroleum Company's O. E. McDowell-Gulf 1, C NE SW Section 196, Block 3-T, encountered water in lime at 3470 feet, and is preparing to plug back and complete as a gasser in the upper section of the lime.

## TEXAS PANHANDLE

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| GRAY COUNTY— | | |
| Bradshaw O&G Co., R. W. Harrah 2 | 305 | 3285 |
| Dixon Creek O&R Co., H. Horner 9 | 801 | 3265 |
| Dyke Oil Co., J. L. Noel 4 | 142 | 3304 |
| R. J. Farless et al, W. J. Ball 1 | * | 3040 |
| King Royalty Co., W. J. Brown-Shell 4 | 311 | 3265 |
| P. A. Tharp & Dawson, J. C. Short 3 | 600 | 3057 |
| HUTCHINSON COUNTY— | | |
| Gulf, H. C. Pitcher 2 | 227 | 3187 |
| Int'l Pet. Corp., T. Lewis-Badger 22 | 438 | 3037 |
| Phillips Pet. Co., Johnson-Eddie 1 | † | 2010 |
| Smith & McDannald, H. C. Pitcher 5 | 283 | 3175 |
| MOORE COUNTY— | | |
| Texoma Nat'l Gas Co., G. L. Trout-man-Sinclair 1 | ¶15 | 3452 |
| WHEELER COUNTY— | | |
| Cub Oil Co., M. J. Williams 1-A | ¶5 | 1732 |

*Failures; †Junked; ¶Million cu. ft. gas.

## WEST TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BREWSTER COUNTY— | | |
| Floyd C. Dodson et al, Texas-American Synd. 1 | † | 1715 |
| ECTOR COUNTY (Judkins Field)— | | |
| Gulf, TP Land Trust 2-G | 71 | 3810 |
| C. L. Peters et al, W. E. Connell 1 | 332 | 3591 |
| HOWARD COUNTY— | | |
| Cardinal Oil Co., W. R. Settles 4 | 100 | 2235 |
| Sinclair Prairie, G. M. Dodge 22 | 335 | 2832 |
| Texas Land & Mtg. Co. 1 | 380 | 2810 |
| JONES COUNTY— | | |
| Condor Pet. Co., H. Sayles 5 | 232 | 1896 |
| H. Sayles 6 | 243 | 1920 |
| Ungren & Frazier, Henry Dorsey-King 2 | 35 | 2086 |
| PECOS COUNTY (Pecos Valley Pool)— | | |
| Tex-Mex Pet. Corp., H. J. Eaton-Pure 2 | 70 | 1636 |
| RUNNELS COUNTY— | | |
| Mann-Currie-Neal, Inc., T. B. Wade 2 | 15 | 2557 |
| UPTON COUNTY— | | |
| Gulf, J. T. McElroy 103 | 173 | 12,786 |
| J. T. McElroy 118 | 404 | 2854 |
| J. T. McElroy 119 | 286 | 3029 |
| WARD COUNTY— | | |
| W. A. Black et al, J. F. York 2 | 486 | 2530 |
| Eastland Oil Co., W. D. Johnson-Sun 1 | 11 | 2570 |
| A. E. Eppenauer et al, G. S. Combs 2-A | 249 | 2675 |
| Pat Hill et al, E. H. Clements-Sun 1 | 305 | 2375 |
| Stanley A. Thompson, Johnson-Sun 4-B | 1251 | 2530 |
| WINKLER COUNTY (Sayre Field)— | | |
| J. C. Maxwell & Atlantic, L. Daugherty 4 | 577 | 2980 |
| Magnolia, J. B. Walton 11 | 745 | 2845 |

*Failures; †Junked; ¶Million cu. ft. gas.

## NORTH TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ARCHER COUNTY— | | |
| L. T. Burns & Long, York Est. 6, sec 1583 | 20 | 1315 |
| Fain-McGaha Oil Corp., L. H. Farmer 1 | * | 1540 |
| Hamer & Scholl, Archer Co. 3 | * | 960 |
| Harry Hines et al, Ward 1-A | * | 950 |
| C. B. Long et al, J. H. Turbeville 1, blk 156 | 35 | 1521 |
| Palmer & Chenault, J. W. Campbell 1, blk 1 | 5 | 574 |
| Perkins-Cullum Oil Co., Falls County 199, blk 6 | 35 | 1168 |
| BAYLOR COUNTY— | | |
| Consolidated Oil Co., Portwood 8-R, sec 1579 | 3000 | 1361 |
| Pet. Producers Co., Portwood 11-H, sec 1579 | 250 | 1367 |
| Portwood 12-H, sec 1579 | 300 | 1375 |
| Portwood 13-H, sec 1579 | * | 1392 |
| Ray & Staniforth, Portwood 21-C, sec 1574 | 800 | 1354 |
| Portwood 22-C, sec 1574 | 850 | 1353 |
| COOKE COUNTY— | | |
| Bridwell Oil Co., J. R. Parkey 1 | * | 1588 |
| E. W. Eaton et al, C. J. Wimmer 1 | * | 1421 |
| Hudspeth-Harvey & Bass, Trueben-bach 5 | 75 | 893 |
| Merrick Drl. Co., Hess 5 | 10 | 899 |
| A. Knabe 11-B, blk 12 | 5 | 874 |
| G. Stelzer 5 | 5 | 1229 |
| A. D. Robinson et al, J. Dangle-mayer 1-A, blk 17 | * | 900 |
| Fred Herr 1, blk 11 | 15 | 824 |
| Schermerhorn O&G Co., J. W. Hess 1 | 200 | 761 |
| FOARD COUNTY— | | |
| Cowden-Clark-Fagadau & Lindsay Drl Co., Dallas Jt. Bank 1 | * | 4001 |
| MONTAGUE COUNTY— | | |
| Arco Oil Co., R. W. Cunningham 7 | 35 | 956 |
| FHE Oil Co., D. A. Lauderback 2 | 20 | 1255 |
| THROCKMORTON COUNTY— | | |
| Bearman Oil Co., Lee Tuton 6 | * | 794 |
| WICHITA COUNTY— | | |
| J. K. Bailey et al, McClure 4-A | * | 1040 |
| H. C. Barrow et al, W. B. Honaker 5 | * | 1060 |
| Horwitz & Oldom, D. E. Hooks 5 | 30 | 1290 |
| W. B. Omohundro et al, D. E. Hooks 8 | 35 | 1215 |
| YOUNG COUNTY— | | |
| Alexander & Page, W. B. Howard 1, sec 3401 | 7 | 916 |
| Paul Atchley et al, F. G. Swain 1, sec 161 | * | 1058 |
| C. E. Beavers et al, Barnett-Gibbs 1, sec 2245 | 35 | 654 |
| Barnett-Gibbs 2, sec 2245 | * | 705 |
| Chambers et al, Benson 1, sec 1392 | * | 1018 |
| H. C. Donohoe et al, Bush 1, sec 778 | * | 902 |
| Clara M. Douglas et al, Finch 9, sec 40 | 10 | 653 |
| Fresno Oil Co., J. M. Kirkland 8, sec 2249 | 125 | 696 |
| Hammond Oil Co., J. G. Elliott 1, sec 1956 | * | 4538 |
| Chas. Knox et al, Mrs. E. Taylor 2-A, sec 3407 | 45 | 2746 |
| Shappell Oil Co., L. L. Anderson 1, sec 269 | * | 555 |
| Steele & Scott, G. P. Stewart 1 | 3 | 932 |
| The Texas Co., Jeffery 11-B, sec 42 | 130 | 710 |
| E. C. Keith 2, sec 267 | 32 | 729 |
| R. J. Watson et al, J. F. Larrimore 2, sec 253 | 35 | 570 |

*Failures; †Junked; ¶Million cu. ft. gas.

# *New Webb Field*

## FEATURES SOUTH TEXAS; LOMA NOVIO EXTENDED

WEEKLY STAFF REPORT

**San Antonio.**—A wildcat strike in Webb County featured South Texas activity of the week. C. H. Lewis et al's E. Lopez 1, slightly more than two miles south and west of the Lopez field showed for a producer on drill stem test of the Mirando sand, apparently extending the field that distance south.

Not only does this well extend the field, but it suggests that this sand lens may flank this large shore line structure for miles and may correspond to Mirando City, and other Mirando sand fields along the trend, from an area standpoint.

The potential producer logged sand at 2251-60 feet, made a drill stem test at 2250-60 feet which showed slightly more than 1100 feet of pipe line oil in 10 minutes and casing was set at 2246 feet. At last reports, preparations were being made to drill plugs.

The test is located 330 feet from the north line and 990 feet from the west line of Section 110, and is offset on the north by G. G. Mortimer. Other close leases are held by G. G. Mortimer and Mills Bennett, both of whom were responsible for the discovery of the original Lopez producing area, opened several months ago.

One new producer was reported in the field, that being Mills Bennett's J. Lopez 6, which flowed at the rate of 256 barrels per day through ½-inch choke. It logged sand with gas at 2123-37 feet and oil sand at 2139-49 feet, casing being set on the lower sand. G. G. Mortimer made two locations, one a direct north offset to the Lewis test and another the M. Lopez 3, a direct south offset to Mills Bennett's newest producer. Rhea Nixon and R. W. Talbot are clearing location for A. S. Billings 1, NW SE SE Section 113, one mile west of the Lopez field and just west of a line between the Mills Bennet production and the Lewis well.

Superior Oil Company of California is making a location for its well to be drilled on the Billings land southwest of the field.

Magnolia Petroleum Company added several more producers in the 2700-foot area of the Cole field, Webb County. Brennan Benavides 15, in sand at 2753-74 feet, produced 40 barrels per day on pump. Brennan Benavides 16 is in sand at 2727-41 feet, casing set atop the sand. It is cleaning. J. Benavides 2 is coring for the regular sand.

### Extend Loma Novio

An extension of nearly one-half mile to the west was provided the southern portion of the Loma Novio field of Duval County by Highland Oil Company's William Hubbard 2-B. The well topped sand at 2572 feet, cored in several feet and set casing. The sand was of a nature to virtually assure an average producer.

This test is located in the northwest corner of the SE¼ Section 75. Nearest production is in the northeast corner of the section.

A number of excellent producers were reported through the general trend of the field. Bridwell Oil Company's Hubbard 4-B jetted 33 barrels the first 45 minutes, but is estimated at 100 barrels per day settled from 2762-78 feet. Same company set casing at 2660 feet on Hubbard 5-B, which has a depth of 2664 feet.

Rodney DeLange's L. B. Moody 2 flowed 16 barrels per hour through ½-inch choke from 2712 feet. He is rigging up Mrs. Nell M. Dubon, NE SE NE Section 76.

Duval Oil Corporation's C. W. Hahl 2, is completing in the upper sand, topped at 2627 feet. Location has been made for Hahl 3, both wells being in Block 6, Section 78.

Gilcrease Oil Company's R. P. McLean 1, Section 62, is completing in sand at 2528-38 feet. Frank Gravis is coring for the sand in A. C. Tunlin 2. He had several more locations in the immediate area of Section 78.

Humble Oil & Refining Company recemented its Ruiz Estate 7, Section 553, which had sand at 2767-83 feet, and has a derrick up for J. F. Welder 4-C, Section 554.

Lipscomb & Daubert's Wm. Hubbard 2 had a bad cement job after getting the sand at 2634-60 feet and are waiting on cement to set the second time.

Magnolia Petroleum Company's C. W. Hahl 7 flowed at the rate of 20 barrels per hour through ½-inch choke from 2645-57 feet. Same company is drilling below 2200 feet in C. W. Hahl 8, both wells in Section 67.

Reynosa Oil Company is completing M. Davidson 1-B, Section 11d, which is in sand at 2583-85 feet. Russ Petroleum Corporation's C. W. Hahl 4-D is jetting 100 barrels per day from 2540-50 feet, while Hahl 5-D is rigging up. Both are in Section 64.

Shell Petroleum Corporation's M. C. Hubbard 7, Section 77, is a good producer, flowing 41 barrels in two hours via gas lift. Total depth is 2765 feet. Same operator has started another well on the lease.

Smith, Hamill & Ogden's M. C. Hubbard 25 flowed 32 barrels per hour through ½-inch choke from 2676 feet. Hubbard 10 made a like amount of oil from sand at 2613-27 feet. Hubbard 9 is coring for the sand. Hubbard 11 is drilling below 1750 feet and Hubbard 13, 14 and 23 are ready to commence.

Stieren Oil Corporation's Wright 8 in the north end of the field, is completing at 2697 feet, casing set at 2684 feet. Sun Oil Company's William Hubbard 1, southeast side of the field, is drilling below 2250 feet.

The Texas Company's C. W. Hahl 5 is completed at 2612 feet, casing at 2595 feet. Hahl 6 is active and Hahl 7 is a location. All being in Block 8, Section 78. Same company is completing H. Wendt 9, depth 2627 feet with casing at 2624 feet.

Seven Sisters field, the other active Duval County producing district, has several rigs running. Atlantic Oil Producing Company is coring for sand in J. F. Welder Heirs 4. Blanco & Buchanan's J. F. Welder Heirs 1, most southerly well in the field, has been completed for 21 barrels per hour through ⅜-inch choke from 2767-77 feet. Welder Heirs 2, one location west, is drilling. Shell Petroleum Corporation has a tentative location offsetting this well on the west. Dulce Oil Company's R. Serna 3 is drilling plugs at 2456 feet. Humble Oil & Refining Company's A. H. Badgley 1 is down 2225 feet. Santa Clara Oil Company's Welder 15 is a completion, but not gauged at 2479-88 feet. Location has been made for Welder 16, one location west. Westheimer and Daube's L. Campos is also a location, as is Mid-Continent Petroleum Corporation's Serna 2.

## EXTEND WEST TULETA

**San Antonio.**—A slight southwest extension was provided to the Ray sector of the West Tuleta field, Bee County, last week through completion of Hill, West and Kleiner's G. A. Ray 1. The well produced 150 barrels of oil in 12 hours through small choke, showing tubing pressure of 300 pounds and casing pressure of 100 pounds. It had sand at 3931-37 feet, casing set at 3931 feet.

Worth Oil Company's Rutledge 3, just southwest of the discovery well of the Rutledge field, Bee County, showed salt water and oil in sands at 3389-90½ feet and 3469-72 feet and has been abandoned at 3472 feet. Location has been made for Rutledge 4, located 660 feet southwest of the discovery well.

Diamond Half Oil Company's A. Eardley Estate 1, five and one-half miles northeast of Carrizo Springs in Dimmitt County, created another flurry of excitement late in the week recovering a saturated core at 3016-21 feet, which carried considerable kick. First drill stem test failed when the tool failed to open.

Several other drill stem tests failed when the seat broke. It now appears as though casing will be set for a test.

The well is located in the northwest corner of a 210-acre tract in the R. G. Morgandale survey No. 6, Abstract 1322. It is being drilled under contract by J. A. Hartmangruber.

# South Coast Active

## NEW COMPLETIONS MADE IN SEVERAL DISTRICTS

**San Antonio.** — Gilcrease Oil Company's W. W. Sanders Estate 1, in the extreme north end of the Baldwin field of Nueces County, was in process of completion late in the week in the 4000-foot sand. This is a key well in this new field and has indicated production in three levels.

From an elevation of 55 feet, derrick floor, it logged a gas sand at 3237-40 feet, upper portion showing gas and lower section both oil and salt water . At 3868-82 feet, it cored another sand, showing oil in the entire section, but no pressure. Carried to 4046-51 feet, it again showed oil and casing was set at 4040 feet. The lower two sands already are producing in the field. The 3200-foot level was shown in several wells, but none of them established commercial production at this level.

In the Saxet field, several work-over operations are attracting a little interest. Texon Royalty Company's M. B. Humphrey 1, an oil producer in the 4800-foot sand, plugged back and sidetracked at 4300 feet, redrilling to 4875 feet, where it is shut down for orders. It likely will be carried to the several distillate sands below 5000 feet. It showed previously for a gasser at 4671-82 feet. Violet Oil Company's McGregor-Belk 2 has been plugged back from its old producing level at 4875 feet and has been completed as a large gasser through perforations at 4080-84 feet.

Shell Petroleum Corporation is making an exploratory deep core hole out of Ed. F. Flato 1, which at last reports was coring below 6787 feet in shale. The hole is being drilled on day to day orders with no specific depth announced. It already has been cored approximately 3500 feet and has had several interesting sands. Heyser Drilling Company is drilling the hole.

Houston Oil Company and Southern Minerals Corporation's W. W. Walton 2-B, in the Saxet field, is completing at 4864-69 feet. It is jetting considerable oil, but is not ready to be put into the tanks. Republic Natural Gas Company also is completing a new producer in the 4800-foot sand. It is John Dunn 10, in sand at 4842-46 feet. Warner Quinlan Company of Texas' T. H. Isensee 2 has been completed at 4857-65½ feet, but no gauge has been made.

Wildcatting continues to show an increase in the Nueces County area. Bluff Petroleum Corporation's Bluntzer 1 has set 525 feet of surface casing. J. K. Culton's Baldwin 1, just west of the town of Corpus Christi is drilling at 2590 feet. Magnolia Petroleum Corporation's Baldwin 2, southwest of the Baldwin field, is drilling at 6511 feet. Richardson and Thomas' Page Brothers 1, northwest of the Saxet field, is shut down at 5850 feet. Santa Clara Oil Company's Clara Driscoll Sevier, near Driscoll, is moving in materials.

La Jita Corporation's Richard King Estate 1, SE SW Section 22, in the King Ranch district, Nueces County, is attracting considerable interest. It drilled to 6008 feet, ran electric formation tester, set casing at 5220 feet and perforated pipe between 5140-55 feet.

The well was being swabbed October 18 and showing a fair amount of oil and mud and a little gas, the well will be slow in completion.

### New Baldwin Wells

Four new producers were completed during the week in the Plymouth field of San Patricio County. One was by the Heep Oil Corporation and the remainder by the Plymouth Oil Company.

Heep Oil Corporation's E. H. Welder 5-F, south end of the main field, was flowing from sand at 5635-45 feet, showing a tubing pressure of 800 pounds and casing pressure of 900 pounds. No gauge had been made through the 5/32-inch choke, but the volume of the oil was estimated at about average for the field. Same operator is drilling at 4788 feet in Welder 3-F. Conroe Drilling Company's E. H. Welder 1-G, still farther south, was coring below 5602 feet.

Plymouth Oil Company's E. H. Welder 15-C is a completion through perforations above 5624 feet. It showed a nice oil sand between 5618-24 feet. Same company's Welder 16-C is flowing into pits under heavy pressure, showing pressures of 1300 pounds on tubing and 1700 pounds on casing. It has casing set at 5618 feet with total depth 5634 feet. Welder 17-C, most northerly well in the field, is a completion at 5518 feet, in the top sand, but it also has not been gauged. The company has one other drilling well, Welder 18-C, which is down 3010 feet in shale and lime. Additional wells will replace the three rigs on wells in process of completion, continuing the policy of the company to dig four holes at one time.

Benedum & Trees' E. H. Welder 1, Section 34, west of the field, is drilling in sticky shale at 2158 feet. Al Buchanan is drilling contractor on all Plymouth Oil Company wells as well as the Benedum & Trees test.

Magnolia Petroleum Company's Corpus Christi Bank & Trust Company 3, south of the field, is drilling below surface casing. Sun Oil Company's J. M. Hunt 1, just east of the main production is ready to core for the 5600-foot sand. Same company has locations for Stone 1 and 2, offsetting Magnolia Petroleum Company's producers on the east.

### Refugio County

Quintana Petroleum Corporation added its 20th consecutive producer to the Tomoconnor field of Refugio County through the completion of Tom O'Connor 21-A, Swisher Survey No. 3. The new producer is approximately 2000 feet northeast of production and opens the way for a number of new wells.

It had sand at 5819-54 feet with the hole bottomed at 5884 feet. No gauge was reported, but production was estimated at about 50 barrels per hour on small choke, as other producers in the field. No. 20-A also is in process of completion in the regular sand. No. 22-A has been started.

Greta field reports a resumption of activity. Humble Oil & Refining Company's Fannie Heard 12 is on the sand at a total depth of 4394 feet, ready to set casing. Edwin M. Jones' J. M. O'Brien 11-A is drilling below 2500 feet.

## SOUTH TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BEE COUNTY— | | |
| Heyser, Heard & Walton, H. C. Young 8, P. B. Rawlins sur (Dirks) | 400 | 3865 |
| Hill, West & Kleiner, G. A. Ray 1, W. B. Blanchard sur, (West Tuleta) | 300 | 3938 |
| Stanolind, W. G. Walton 3, sec 21 (W. Tuleta) | 500 | 3960 |
| The Texas Co., S. E. Young 8, T. J. Butler sur (Dirks) | 550 | 3914 |
| Worth Oil Co., Rutledge 3, A. Hadley sur (Rutledge) | * | 3472 |
| BEXAR COUNTY | | |
| Nick Marosis, Joe Florey Est 1, 150 ft nl and wl of 21.1-ac tr, S. Jett sur (Von Ormy) | * | 770 |
| Richcul Oil Co., Karl Weilbacher 2, sec 54 (Von Ormy) | * | 780 |
| DUVAL COUNTY— | | |
| Alpha Oil Co., M. C. Hubbard 1, sec 69 (Loma Novia) | * | 2900 |
| Bridwell Oil Co., M. C. Hubbard 4-B, sec 75 (Loma Novia) | 100 | 2678 |
| Buchanan & Blanco, J. F. Welder Heirs 1, ne sw sec 385 (Seven Sisters) | 525 | 2477 |
| Rodney DeLange, L. B. Moody 2, se ne sec 76 (Loma Novia) | 384 | 2712 |
| Frank Gravis, Flodin 2, blk 2, sur 78 (Loma Novia) | 325 | 2564 |
| Highland Oil Co., M. C. Hubbard 4, sec 72 (Loma Novia) | 75 | 2727 |
| Chas. Kleiner et al, D. Ruiz 1, sec 125 (Hoffman) | * | 2716 |
| K. O. T. Oil Co., Lundell 5, se sw sec 48 (Gov't Wells) | * | 2450 |
| Magnolia, C. W. Hahl 7, sec 67 (Loma Novia) | 480 | 2657 |
| Russ Pet. Co., C. W. Hahl 4-D, ne ne sec 64 (Loma Novia) | 100 | 2550 |
| Seaport, Duval Ranch 8-A, sec 574 (Sarnosa) | 27 | 2405 |
| Shell Pet. Corp., M. C. Hubbard 7, sec 77 (Loma Novia) | 500 | 2765 |
| Smith & Hammil, M. C. Hubbard 10, sec 77 (Loma Novia) | 750 | 2627 |
| M. C. Hubbard 25, sec 77 (Loma Novia) | 750 | 2676 |
| McMULLEN COUNTY— | | |
| C. W. Points, Fahler 1, 432 ft sl, 819 ft el Byrne pasture, Geo. Pittuck sur, 5 mi w Calliham | * | 1004 |
| NUECES COUNTY— | | |
| Violet Oil Co., McGregor-Belk 2, King sur, No. 311, (Saxet), ow, pb and perf 4080-84 | ¶20 | 4875 |
| Warner Quinlan Co. of Tex., T.H. Isensee 2, blk 1, Sheppard Farm Lots, sec 313 (Saxet) | 450 | 3865 |
| REFUGIO COUNTY— | | |
| Quintana Pet. Corp., Tom O'Connor 21-A, Swisher sur No. 3 (Tomoconnor) | 1200 | 5885 |
| TRAVIS COUNTY— | | |
| C. B. Collard, J. Blenberg 1, 840 ft sel, 150 ft nel of 99-ac tr in Windburn sur | * | 885 |
| WEBB COUNTY— | | |
| Mills Bennett, J. Lopez 6, sh 10-B, sec 3 (Lopez) | 256 | 2149 |
| Magnolia, Brennan Benavides 15, blk 153, Arispe gr, (Cole) | 40 | 2774 |
| WILLIAMSON COUNTY— | | |
| J. Morgan Russell, A. J. Nelson Est 4, 450 ft sl, 1220 ft el of J. J. Justice sur, ow dd from 368 ft. | * | 618 |
| ZAPATA COUNTY— | | |
| Humble, E. Dominguez 1, 12,785 ft nel, 1320 ft sel of por 31 (Ranchito) | * | 5973 |

*Failures; †Junked; ¶Million cu. ft. gas.

can Rio Grande Land and Irrigation Company 5, located 600 feet northwest of the discovery well of the Mercedes field, Hidalgo County. It drilled to 7529 feet, ran casing to total depth and made a series of perforations between 7494-7501 feet, the result being a fair amount of oil, but not enough pressure to lift the fluid. It has been perforated for the fourth time and efforts are being made to complete the well. Last perforations are at 7479-88 feet.

Same company's sixth well, 4500 feet northeast of the No. 1, is drilling below 4250 feet.

One Hidalgo County wildcat was showing signs of making a producer. It is S. J. Sloan et al's Brock and Showers 1, in the southwest corner of Block 16, Porcion 80, west of Mission. After drilling to 6003 feet, an electric formation test was run which indicated sands between 4630-70 feet. Casing was run to 4715 feet and it is being perforated in the upper showing.

Mundy & Stevens were still trying to complete F. B. Guerral, north of the east end of the Samfordyce field. The well is at a total depth of 3030 feet with casing set at 2990 feet. It has a sand section between 2937-51 feet showing oil. At last reports, it was washing with oil and jetting.

The Samfordyce field apparently was extended farther north into Starr County as completion was being attempted on H. J. Porter et al's Garcia Land and Cattle Company 1-B, located 1900 feet north of the west end of production. The well cored sand at 2785-93 feet and shale at 2793-2801 feet and was testing. It is in Blocks 2 and 3, Porcion 100.

### Starr County

Tests were being made late in the week in T. K. Irwin's Starr County Cattle Company 1, in the Barbacoas area of Starr County. The well originally was drilled to 2817 feet by A. Nix and associates, at which point it was abandoned. It was then logged with an electric formation logging device. plugged back to 1853 feet and sidetracked. Six sands were cored to 2320 feet. all giving some indications of production. Casing has been set and selective testing will be done via the gun perforating method. The first test will be in an oil sand at 2312-20 feet and a gas sand at 2300-08 feet. A shale and sand cap separate the two sands.

The shallow Los Olmos field apparently was extended 2000 feet to the west by Frank Doyno's Seabury 1, Tract 5, Porcion 75. This Starr County wildcat cored sand at 372-76 feet, which show oil and casing has been set.

## GOLIAD COUNTY

**San Antonio.**— Keystone Royalties Company's C. B. Wood 1-A (2) in Goliad County, about three miles east of the town of Berclair, is in process of completion. The well topped sand at 5975 feet and attempted to core in 10 feet. It showed a tremendous gas pressure and carried a little oil. The well tried to blow out, but has been put under control. Casing is being run, 5000 feet being in the hole October 18, and completion is expected early in the week.

# *Define Anahuac*

## NORTHEAST EDGE OF FIELD MARKED BY FAILURE

WEEKLY STAFF REPORT

**Houston.**—Woodley Petroleum Company's A. G. Blanke 1, one and three-quarters mile northeast of R. A. Mason & Glenn H. McCarthy's White 1, was abandoned during the past week at 7452 feet to define the Anahuac field, Chambers County, in the northeasterly direction. On an electrical logging device the well showed a sand at 7432 feet which contained salt water. Another salt water sand was found from 7248 to 7256 feet.

With the completion of this well as a failure it definitely defines the Anahuac field to the northeast. It also indicates that the field will not be as big as it was anticipated. Some estimates were that the field would be around 10,000 acres.

Humble Oil & Refining Company, Glenn H. McCarthy & R. A. Mason's White 2, west offset to White 1, and north offset to Sun Oil Company's White 2, was completed during the past week at 7085 feet for 26 barrels per hour through a quarter-inch choke. Tubing pressure was 1100 pounds; casing pressure 1250 pounds. The well made 300,000 cubic feet of gas along with the oil. The gas sand was topped at 6892 feet and the oil sand was found below 7000 feet. Seven-inch casing was set at 7026 feet.

Humble Oil & Refining Company's Broussard 5, east offset to Broussard 1, H. & T. C. Survey, Section 63, was waiting on cement to set at the close of the week after drilling to 7083 feet in oil sand. Top of the sand was found at 7040 feet.

Humble Oil & Refining Company has made location for J. E. Broussard 2-B, 869 feet east of B-1, 466 feet south of the north line of H. & T. C. Survey, Section 59. J. E. Broussard B-3, is located 869 feet east of Broussard B-2 and 466 feet south of the north line of H. & T. C. Survey, Section 59. Humble Oil & Refining Company's Middleton 9, is in the H. & T. C. Survey, Section 58, being 873 feet south of Middleton 5 and 466 feet west of the east line of survey. Humble Oil & Refining Company, Glenn H. McCarthy & R. A. Mason's White 3, is located 933 feet west of White 2, and 466 feet north of the south line of J. McCahey Survey. It is a north offset to Sun Oil Company's White 3.

### Testing Jefferson Well

Sun Oil Company's Broussard-Hebert 1, Labelle prospect wildcat, B. Blackmon Survey, Jefferson County, was drilling out cement at 8282 feet October 18. The operators were going to make a survey of the hole and then make a production test of this possible discovery well. The operators have set 9⅝-inch casing at 8210 feet and will test sand and shale showing oil from 8227 to 8265 feet.

Humble Oil & Refining Company has made location for R. B. Miller et al 1, in the A. Savery Survey, Jefferson County. It is 1399 feet south and 466 feet west from the northeast corner of Block 7 in the Villa subdivision, or 6650 feet west of the east line and 5500 feet north of the south line of the survey.

This wildcat is located in the new Amelia prospect, where Humble Oil & Refining Company, Stanolind Oil & Gas Company, Shell Petroleum Corporation, Magnolia Petroleum Company and Gulf Production Company have been leasing for some time. The Amelia prospect has been worked with torsion balance by Magnolia Petroleum Company this year. Reflection seismograph work was done by Sun Oil Company and Stanolind Oil & Gas Company this year. Humble Oil & Refining Company has done considerable geophysical work in this area with instruments.

This area has been worked extensively for the past five months, starting at the extreme north part of the county, near the town of Votaw, south approximately 17 miles to Cheek and then southeast of Cheek 15 miles. In some places the operators worked eight miles across. The surveys that seem to have had the most activity are Stivers, C. Hillibrand, A. Savery and C. Williams Survey.

### Dickinson Field

Coast Petroleum Company has made location for Maco Stewart 2, in the W. K. Wilson Survey. It is 660 feet due west of Maco Stewart 1, and 330 feet north of the south line of lease. Coast Petroleum Company's Maco Stewart 1, extend the Dickinson field over two miles in the southwest direction some time ago. The well only made gas and distillate. However it was reported that the well was making 152 barrels of distillate daily and was being sold to a Texas City operator.

### Hastings Gas Well

The second gas well was completed in the Hastings field, Brazoria County, during the past week by Stanolind Oil & Gas Company. Ford 2, north flank test, H. & T. B. Survey No. 1, was

completed for 3,500,000 cubic feet of gas daily from 6102 feet. Seven-inch casing was set at 6085 feet. Top of the sand was found at 6090 feet. Tubing was set at 6093 feet. The well also made 16 barrels of fluid through a quarter-inch choke with a casing pressure of 2000 pounds; tubing pressure 1950 pounds.

Stanolind Oil & Gas Company's Drake 3, is the highest well in the field so far and has set seven-inch casing on top of over 500 feet of oil sand and shale. The bottom of the hole is 5830 feet and casing was set at 5632 feet. However, the operators will case off some of the sand and will perforate at a later date.

The same operator's Kidd 2, A. C. H. & B. Survey No. 2, was drilling plug at the end of the week and it will be completed over the week end. The bottom of the hole is 6115 feet and seven-inch casing was set at 6083 feet. The test topped the Discorbis at 5240 feet, Heterostegina 5540, and the Marginulina at 5600 feet. The same operator's H. G. Williams 3, A. C. H. & B. Survey No. 1, was being washed in late in the week. The bottom of the hole is at 6106 feet.

In the South Houston field, Harris County, Stanolind Oil & Gas Company's Drilling District 15, Well No. 1, (Hartow), was temporarily abandoned at 6429 feet. This well is apparently the first failure for the South Houston field. It is located in the H. & T. B. Survey, Abstract 386, being center of 10, Block 82, drilling district 15.

In Burleson County, Carl Dyer et al have made location for C. W. Young 1. It is 650 feet east of the west line and 330 feet south of the north line of John Bird Survey. The test has spudded.

## FLOWS CUT OIL

### Bay City test doing 20 barrels per hour

**Houston.** — Skelly Oil Company's Cobb B-3, 2235 feet northeast of the discovery well, Van Vleck or Bay City field, M. Cummings Survey, Matagorda County, was flowing oil and salt water October 18, from 8227½ feet in the Frio formation.

The well was brought in to open a new producing horizon for the field making 20 barrels per hour through a quarter-inch choke showing 24 percent salt water. Tubing pressure was 800 pounds; casing 900 pounds. At the close of the week the salt water was increasing where it probably will force the operators to work the well over.

From 8224 to 8227½ feet the operators perforated the casing and made a drill stem test. The well flowed pipe line oil for 20 minutes. When the stands were broke down it was found to have 810 feet of oil and some salt water. The well had a shut-in pressure of 1025 pounds.

The casing was originally perforated from 8227 to 8234 feet and flowed oil and salt water. After testing salt water the hole was recemented and was again perforated from 8224 to 8227½ feet. The well was being washed in October 16.

The discovery well for the field was being worked over at the end of the week and was drilling down to the new deep sand for the field. The operators were preparing to core at 7440 feet.

The Texas Company's Pierce Estate C-1, Five Corners prospect, approximately eight miles southeast of the Pickett Ridge field, J. Caldwell Survey, Wharton County, was drilling below 5478 feet at the end of the week. An odor of gas was found from 5462 to 5466 feet. The well topped the Discorbis at 4873 feet and the Heterostegina at 5030 feet. Marginulina was picked up at 5264 feet. The wildcat is running higher than Pure Oil Company's Paige 1, which is approximately three miles southwest of The Texas Company's Pierce Estate C-1.

Pure Oil Company's Paige 1, Blue Basin prospect, J. Pirie Survey, Wharton County, was drilling at 5654 feet during the past week after topping the Heterostegina at 5230 feet. The Discorbis was found at 4893 feet, Marginulina was encounted at 5580 feet. A core was taken from 5455 to 5458 feet which showed shale with no showings of oil.

In Colorado County, Trans-State Oil Company's Witte 1, two miles south of Bernardo, H. White Survey, was finaled as a dry hole at 5010 feet. The well topped the Hockleyensis at 3250 feet, Cockfield at 4605 feet.

## TEST NEW SAND

### Tepetate field new zone shows oil and water

**Lake Charles.**—A new sand for the Tepetate field, Acadia Parish, was tested the past week when Continental Oil Company's Vincient 1, 2500 feet north of the discovery well, made a drill stem test at 7772 to 7777 feet, which showed oil and salt water. The well is now drilling ahead to the Lower Marginulina-Frio sand, which is found around 8310 feet.

The drill stem test was made through quarter-inch chokes on top and bottom, and showed 950 feet of oil and 30 feet of salt water. The well showed 100 pounds pressure. Vincient 1 is so far the highest well structurally drilled in the field and is running approximately 70 feet higher than the discovery well.

The same operator's Klump 1, Section 34-7s-2w, three-quarters mile southwest of the discovery well, was setting seven-inch casing at 8442 feet and will perforate at the producing sand found in the discovery well. The well was drilled below 8880 feet and had sand showing oil from 8326 to 8372 feet. The top of the sand had a good showing of oil but the lower section contained salt water. A gas sand was found at 8344 feet. The well was bottomed in the Vicksburg formation. It is running 40 to 50 feet lower than the discovery well.

Continental Oil Company's Homeseekers Development Company 1, Section 29-7s-2w, 4250 feet west and little south of the discovery well, was drilling in sandy shale at 8686 feet after drilling through sand showing oil from 8260 to 8304 feet, a gas sand at 8306 feet and another oil sand from 8452 to 8486 feet. An electrical logging device was run and it was decided to carry the well deeper.

In Jefferson Davis Parish, J. K. Lewis has made location on the Heckner prospect. Locke-Moore 1, is located 150 feet north and 150 feet west of the southeast corner of the W2 of NE 4 of Section 32-7s-6w. Superior Oil Producing Company originally took the block and turned it to J. K. Lewis for the drilling of a well. Superior Oil Producing Company has worked in the area with reflection seismograph the past year. Gulf Refining Company has also done considerable geophysical work in the general area and so has Humble Oil & Refining Company. This well will be the first well to be drilled on this new prospect.

In Beauregard and Allen parishes along the so-called Conroe trend, Humble Oil & Refining Company is reported to be taking all its acreage that it released in the area some time ago. The Amerada Petroleum Company's wildcat well in Rapides Parish, which had a showing of oil in the Cockfield has influenced the Conroe trend in the Louisiana Gulf Coast.

## TEXAS GULF COAST

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ANAHUAC— | | |
| Humble, Glenn H. McCarthy & R. A. Mason, White 2 | 624 | 7085 |
| CLAY CREEK— | | |
| Joe Pompykal, Klattle 1 | * | 2033 |
| HASTINGS— | | |
| Stanolind, Ford 2 | ¶3¼ | 6102 |
| MANVEL— | | |
| Burton Drilling Co., Beddoe 2 | * | lcn. |
| Texas Co., Belcher B-15 | 500 | 5156 |
| Turnbull & Irwin, Hart 2 | 25 | 4020 |
| PIERCE JUNCTION— | | |
| Harrison & Abercrombie, Ritter 6 | 576 | 3661 |
| SOUTH HOUSTON— | | |
| Stanolind, Drilling District 15, Well 1 | * | 6429 |
| TOMBALL— | | |
| Humble, Faris 3 | 475 | 5562 |
| F. Theis 3 | ¶2½ | 5580 |
| CHAMBERS COUNTY— | | |
| Woodley Petroleum Co., Blanke 1, H&TC Survey, Section 41 | * | 7452 |
| COLORADO COUNTY— | | |
| Trans-State Oil Co., Witte 1, 2 mi s of Bernardo, H. Witte sur. | * | 5010 |

*Failures; †Junked; ¶Million cu. ft. gas.

### New Gillis Gas Sand

A new gas sand was found in the Gillis field, Calcasieu Parish during the past week when Union Sulphur Company's State 12, Section 12-9s-8w, southeast extension test, made a production test from 7535 to 7545 feet. The well came in for a gas well with a tubing pressure of 2400 pounds through a quarter-inch choke. The sand was found 7525 to 7563 feet. At the end of the week the operators were cutting and pulling the casing. Union Sulphur Company's Barbe 4, Section 11-9s-8w, northwest extension test, was running an electrical logging device at 6776 feet in sand showing oil. The oil sand was topped at 6774 feet.

South of Lake Charles, and in the area where Union Sulphur Company's Prairie Farm Land 1, was drilled to 9041 feet in shale and was abandoned, Union Sulphur Company has made a selection on its block after reworking with reflection seismograph. The selection included around 10,000 acres.

## NEW OIL SANDS

### Found in New Iberia and White Castle fields

**Lake Charles.**—Two new deep sands have been discovered in the New Iberia field within the past two weeks. The most recent discovery was Harrison & Abercrombie's Schwing 4, 4000 feet west of the New Iberia field, Iberia Parish, which cored a sand from 6754 to 6780 feet. The Texas Company's Hanzen 1-B, was completed during the previous week from new sands at 5385 to 5405 feet. The well made around 80 barrels per hour.

Harrison & Abercrombie's Schwing 1 was preparing to drill plugs October 18, and will set screen and make a production test over the week end. If the well proves a commercial producer it will be the deepest producing sand in the field. The sand and shale showing oil is from 6754 to 6780 feet. The seven-inch casing was set at 6771 feet. The well is 2600 feet south and 2901 feet east of the northwest corner of Section 56-12s-7e.

The Texas Company's Henzen 1-B, discovery well for a new sand the previous week, was completed the past week for 80 barrels per hour through a half-inch choke. Tubing pressure was 650 pounds. The oil sand was found from 5385 to 5401 feet the bottom of the hole. The operators set 20 feet of 6⅝-inch screen, 99 feet of blank screen, 12 feet, eight inches of packer. The oil tested 29 gravity at 82 degrees F. Nine and five-eighths-inch casing was set at 5384 feet.

In St. Martin Parish, Y. D. Spell, who drilled Bernard 1 in the New Iberia field and discovered a new producing sand July 4, 1934, has made location for a deep test on Anse La Butte Dome in Section 71-9s-5e. In the same area it is reported Zeni Oil Company is going to drill a well the first part of 1936.

#### White Castle New Zone

A new producing sand was found in the White Castle field, Iberville Parish, during the past week when Shell Petroleum Corporation's White 1 was completed at 8942 feet flowing 69 barrels per day from the Miocene sands. A twenty-two sixty-fourth-inch choke was used. Tubing pressure was 130 pounds.

The hole was drilled to 8942 feet in sandy shale, encountering an oil sand from 8925 to 8939 feet. Two and half inch tubing was hung at 8908 feet and the well came in for 14 barrels per hour by heads through a quarter-inch choke with 200 pounds pressure on the tubing. The well showed no water.

During August, 1935, the well was completed at 8919 feet and on an 11½ hour gauge the well made 276 barrels of pipe line oil through a quarter inch choke with a tubing pressure of 1000 pounds; casing pressure 1220 pounds. Seven inch casing had been set at 8889 feet. On an electrical logging device the well showed 20 ohms from 8894 to 8902 feet. The well, however, showed water later and was forced to be worked over.

Adams 1 is the deepest well drilled in the White Castle field. The deepest well heretofore was Shell Petroleum Corporation's Wilbert 9, which was drilled to 6564 feet, and opened a new sand when it came in for 1162 barrels per day through a three-eighths inch choke. Adams 1 is producing oil over 2470 feet deeper than Wilbert 9.

Shell Petroleum Corporation has been staging an exciting lease play northeast of the White Castle field, across the Mississippi river. The play has been in progress for some time.

#### Pan-American Locations

Pan American Production Company has made location for Haas-Hirsh 1, on the west flank of the Port Barre field, St. Landry Parish. It is located 1118 feet west and 450 feet south of the northeast corner of section 4-6s-5e. The operators took the block over from Harvey Weir and worked in the area with reflection seismograph.

Pan American Production Company also has made location for Lutcher Moore 1, on the Mud Lake Prospect in Cameron Parish. It is located 17,090 feet west and 420 feet north of the southeast corner of 14s-11w, or 300 feet north and 3500 feet west of the northwest corner of the bridge over the First Bayou.

At the Sunset prospect in St. Landry Parish, it is reported Gulf Refining Company has dropped over 5000 acres. The prospect has been active for the past six months with several of major oil companies participating. Gulf Refining Company held acreage around Section 80-7s-4e.

In Evangeline Parish, it is understood that a major oil company is leasing acreage Basile Oil Company's 6520 foot dry hole in Section 14-6s-2w. Reflection seismograph work has been prominent in this area with several of the major oil companies shooting on large option blocks.

## PLUG DEEP TEST

**Lake Charles.**—Superior Oil Producing Company's Duplantier Community 1, south of Baton Rouge, East Baton Rouge Parish, has been definitely abandoned after plugging back from 10,360 feet to test shallower showings.

The well was plugged back to 6416 feet and casing was perforated from 6500 to 6505 feet. A drill stem test was made which showed oil, gas, salt water and mud. The test was made in 20 minutes through a quarter inch choke on top and bottom. The first 11 stands showed gas with a light spray of oil and the 12th stand was full of oil and headed for seven and half minutes. The next six stands showed oil and sand and then the well started making salt water. The remaining 53 stands contained salt water, gas and mud. The oil was estimated being 32 gravity.

It took the operators one and half hours to make the drill stem test from the time they started into the hole until the time they started coming out. The testing tool was cut with sand and was not completely able to be closed.

With the failure of this wildcat, it does not completely condemn this area as the amount of gas and oil showings indicated that the area will produce oil in commercial quantites.

Superior Oil Producing Company after rechecking the prospect with reflection seismograph will probably stake a new location southwest of the dry hole and drill on University lands.

The wildcat is located 1500 feet westerly along the north line from the northeast corner of a 129 acre tract and 330 feet south at right angles in Section 65-7s-1w. It is south of Baton Rouge and located on the University prospect, in East Baton Rouge Parish.

It has been reported The Texas Company has moved a reflection seismograph crew into the Lake Pontchartrain area and will start shooting the 470,000 acre block that the operators leased some time ago from the State of Louisiana.

## LOUISIANA PERMITS

**Shreveport.**—Seventeen drilling permits were authorized last week in Louisiana by the minerals division of the state Conservation Commission. Ten were for North Louisiana divided among the following parishes: Caddo, seven, (including five for the Rodessa field, DeSoto, two; and Ouachita, one. Those in south Louisiana were divided among the following parishes: Calcasieu, two; Iberia, three; St. Landry, one; and Terrebonne, one.


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## SOUTH LOUISIANA

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| IOWA— | | |
| Shell, Heyd 18 | 450 | 6960 |
| NEW IBERIA— | | |
| Texas Co., Hanzen 1-B | 2000 | 5401 |
| WHITE CASTLE— | | |
| Shell, Adams 1 (wo) | 69 | 8942 |
| Watkins 25 | 240 | 4686 |
| EAST BATON ROUGE PARISH— | | |
| Superior, Duplantier Community 1, University block, sec 65-7s-1w... | * | 10,360 |

*Failures; †Junked; ¶Million cu. ft. gas.

# *Ninth Oil Producer*

## LATEST RODESSA TEST MAKES 105 BARRELS HOUR FLOW

NORTH LOUISIANA

WEEKLY STAFF REPORT

**Shreveport.**—Rodessa added its ninth oil well last week when United Gas Public Service Company's G. Gibson Estate 2, SE SW SE 15-23n-16w, in the eastern part of the field was completed Saturday, October 12, flowing 105 barrels of oil per hour through half-inch choke on tubing from total depth of 6004 feet. Pressure on the tubing was 425 pounds and on the casing, 500 pounds. Five and three quarter-inch casing was cemented at 5963 feet.

This well for the 24 hours ending at 7 a. m., Tuesday, October 15, made 1610 barrels flowing through half-inch casing choke and three quarter-inch tubing choke. Casing pressure during that period was 1250 pounds and tubing pressure, 350 pounds. Runs for the same period were 1801 barrels. Flow temperature was 108 degrees and the oil showed 46.1 gravity at 101 degrees b.s. and water, .3 of 1 percent.

Three new locations were made last week in Rodessa. They are Pelican Oil & Gasoline Company's Sexton Unit 2, SW SE NE 14-23n-16w, and Sexton Unit 3, NW SE NE 14-23n-16w; and Bartex Drilling Company's Sarah Bruner 1, C NE SE 13-23n-16w.

Up to October 15, the Rodessa field had run 331,024 barrels of oil since the discovery well was completed July 16. Of this amount the first oil well in the field, United Gas Public Service Company's I. L. Young 1, SE SE 21-23n-16w, had furnished 160,374 barrels. Production from other wells were:

United Gas Public Service Company's Thomas 1, a total of 14,716 barrels.

Bremer 1, a total of 11,987 barrels; Gibson 1, a total of 1801 barrels.

Rodessa Oil & Land Company 1, a total of 2305 barrels.

Haynes Production Company's Lawton 1, a total of 77,987 barrels, this being the second producer in the field.

H. Otwell 1, a total of 19,844 barrels.

R. W. Norton's Caddo Levee Board 1, a total of 4589 barrels.

O'Brien Brothers' Rodessa Oil & Land Company 1, a total of 34,494 barrels.

Pelican Oil & Gasoline Company's Sexton 1, a total of 2927 barrels.

Standard Pipe Line Company is buying all the Rodessa production.

Entry of another major company into Rodessa occurred last week when Magnolia Petroleum Company paid B. H. Vaughan of Shreveport, $9000 for 40 acres being W½ W½ SW Section 3-23n-15w, and the south 355 feet of SW NW of the same section. John H. Tucker, Jr., Shreveport attorney paid $14,000 cash for half the mineral rights on N½ NE Section 7-23n-16w (80 acres).

Louisiana Conservation Commission last week continued its gauge of Rodessa wells on a half-inch positive choke on tubing and casing to determine the wells' potentials. Wells gauged last week and the results with tank co-efficient of 5.5 are: United Gas Public Service Company's Bremer 1, 90.75 barrels per hour of 42.5 gravity oil with 800 pounds tubing pressure and 1175 pounds casing pressure; Haynes Production Company's Otwell 1, 87 barrels per hour of 42.5 gravity oil and six percent salt water, with 750 pounds tubing pressure and 900 pounds casing pressure; R. W. Norton's Levee Board 1, 66 barrels per hour of 43 gravity oil with five-tenths of one percent water, 425 pounds tubing pressure and 1250 pounds casing pressure; United Gas Public Service Company's Thomas Unit 1, 49 barrels of 42.5 gravity oil per hour with three percent water and basic sediment, with 1550 pounds tubing pressure and 2200 pounds casing pressure.

### Salt Water

Proving that the salt water level in Rodessa is deeper than at first thought and indicating that the salt water that has appeared in that field is likely to be from a lens and not from the bottom, United Gas Public Service Company's Rodessa Oil & Land Company 1, Section 15-23n-16w, drilled to 6041 feet to seek the salt water level did not find it and it plugged back to 6002 feet; elevation is 212.2 feet. Saturation was topped in the oolitic lime at 5950 feet. The sub-sea tentative location of the supposed salt water level had been placed at 5790 feet. This well as 6041 feet for the 24-hour period ending at 7 a .m. October 15, produced 1295 barrels of fluid with an average of 23 to 30 percent salt water through half-inch casing choke and 20/64-inch tubing choke. The gravity was 44.9 at 99 degrees and the flow temperature was 108 degrees. Casing pressure was 550 pounds and tubing pressure 575 pounds.

Hope that oil production in large amount might be found in the second or middle horizon known locally in Rodessa as "The Gloyd Sand" faded for the immediate future last week when Haynes Production Company's W. B. Lawton 2, Section 14-23n-16w, after being washed for several hours with water and later with oil failed to produce at 5882 feet and is being deepened


# ANOTHER O-C-T
## *STREAMLINE CHRISTMAS-TREE*

**Means Another Well Is Being *Safely* and *Profitably* Produced!**

**The Well—**

**Warner-Quinlin Lease, Clarkwood Field, near Corpus Christi, Texas, where high pressure and sand cutting is hazardous.**

**The Men—**

**(Left to right) T. M. Smith, W-K-M Co. Salesman; D. A. Dechman, Mgr. Warner-Quinlin Co.; A. J. Penick, Pres., Oil Center Tool Co.; and W. S. Johnston, Supt., Warner-Quinlin Co.**

to the third horizon which produces the oil at around 6000 feet. A saturated core was taken from the well at 5850-65 feet. Some oil men have believed that oil production will be found in the "Gloyd Sand" in the Rodessa area.

Grady Vaughan's Comegys 1, SE SE 10-23n-16w, a north outpost test in Rodessa logged top of the anhydrite at 5095 feet last week; elevation is 246 feet. This makes this contact check 84 feet lower than United Gas Public Service Company's I. L. Young 1, SE SE 21-23n-16w, and 64 feet lower on this contact than Haynes Production Company's W. B. Lawton 1, Section 14-23n-16w. The dip is normal at Rodessa to the north.

### Wildcats

Chief interest in wildcat tests in North Louisiana was centered last week in two tests in the North Louisiana Basin which reported positive results indicating production after electrical tests were made of formations in the Glen Rose of the upper Trinity formation below 5200 feet.

American Liberty Oil Company's Golson 1, NW NW 25-17n-1w, Ouachita Parish, was drilling plug and arranging to test at 5381 feet, four feet in black shale after reportedly coring a sand showing oil and gas at 5330-66 feet under 5330 feet, after having a similar formation at 5204-43 feet. Five and one half-inch casing was cemented at 5200 feet.

In Lincoln Parish, Arkansas Natural Gas Corporation which already owned the gas rights on the block, has acquired Lide & Greer's Fowler 1, NW SW SE 10-17n-4w, and cemented seven-inch casing at 5270 feet after this test logged a gas sand at 5381-5303 feet. An electrical test was run. Plug will be drilled probably next week. This test is on a geophysical high, checked with extensive geological data.

Derricks were erected last week on two locations on a 50,000-acre block of wildcat leases situated in parts of Ouachita, Jackson and Lincoln Parishes in the North Louisiana Basin by Caldwell Land & Timber Company (George T. Shaw and associates). One location just south of the town of Choudrant is in Lincoln Parish. It is Luther Hammonds 1, NWc NE NW 30-18n-1w, and the other is in Jackson Parish, Burroughs Estate 1, NE NW 1-17n-1w. Both will be drilled to 3500 feet and from the data secured location will be made for a test to the oolitic lime horizon of the Glen Rose. This block is between two tests drilled to the oolitic lime below 5000 feet, one in Lincoln Parish, and the other in Ouachita Parish.

McIntyre and associates last week cored four feet of Cockfield sand showing gas at 856-60 feet in Tensas Delta Lumber Company 1, SW NW SE 18-10n-7e, Catahoula Parish, northeast Louisiana in the "Conroe Trend," and were preparing to run formation tester. Several wells in this general area have shown much gas in this formation.

## Rodessa Drilling Report

Arkansas-Louisiana Gas Co.'s Rodessa O&L Co. 3, se se 22-23n-16w, dr 5567 ft, anhydrite; Rodessa O&L Co. 4, nw ne 23-23n-16w, spd dr 596 ft shale.

Bartex Drlg. Co.'s (Phillips Pet. Co.), Wilbanks 1, ne se 7-23n-16w, mim. Sarah Bruner 1, cent. ne se 13-23n-16w, rur.

T. F. Birmingham's Gibson Pitts Fee 1, ne nw sw 10-23n-16w, mim.

Eastern Texas Prod. Co.'s & D. C. Richardson's School Bd. 1, swc blk 25, 23-23n-16w, setting 5¼ in csg 5960 ft, td 6032 ft.

Danciger O&R Co.'s Willis 1, lot 5, block 7, 23-23n-16w, rur.

Haynes Prod. Co.'s W. B. Lawton 2, se nw sw 14-23n-16w, base massive anhydrite 5568 ft, 7-in csg 5832 ft, tested est 200 bbls oil and small amt gas at 5882 ft, dr 5983 ft lime and shale; W. B. Lawton 3, nw se 14-23n-16w, rur. H. Otwell 2, sw sw 14-23n-16w, dr 3700 ft red beds; Sexton 1, cent. 14-23n-16w, arr set csg, td 6014 ft; Sexton 2, 14-23n-16w, rur.

W. M. Layton's Tyson 1, se nw 22-23n-16w, spd wocs 278 ft.

Lion O&R Co.'s J. M. Wynn 1, ne sw 9-23n-15w, rur.

Monahan Oil Co.'s Comegys 1, 10-23n-16w, spd dr 1870 ft; Comegys 2, 10-23n-16w, lcn.

McAlester Fuel Co.'s Noah Tyson Hrs. 1, se nw 22-23n-16w, spd dr 475 ft.

M. H. Marrs et al's Hunter 1, se nw sw 13-23n-16w, rur.

R. W. Norton's Caddo Levee Bd. 2, nw se 21-23n-16w, wocs 434 ft; Tyson 1, nw nw 13-23n-16w, dr 4685 ft; Foscue 1, ne se 20-23n-16w, dr 4724 ft shale and lime.

Pelican Oil & Gasoline Co.'s Sexton Unit 2, sw se ne 14-23n-16w, mim; Sexton Unit 3, nw se ne 14-23n-16w, mim.

United Gas Pub Serv. Co.'s Rodessa O&L Co. 2, ne ne 22-23n-16w, 5¾ in csg 5313 ft, dr 5790 ft shale and anhydrite; Ardis 1, se sw se 14-23n-16w, spd, dr 396 ft; Poole 1, ne ne 21-23n-16w, mim.

United Prod. Co.'s Thurmond Unit 1, nec Jno. Coleman sur (Cass County, Texas), spd wocs 424 ft.

Grady Vaughan's Comegys 1, se se 10-23n-16w, dr 5130 ft; Derryberry 1, sw ne nw 14-23n-16w, elev 246 ft, top anhydrite 5093 ft, dr 5095 ft.

## NORTH LOUISIANA

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| CADDO PARISH (Rodessa)— | | |
| United Gas, Gipson 2, 14-23n-16w | 1610 | 6004 |
| R. W. Norton, Caddo L. B. 1, 21-23n-16w | 1176 | 6000 |
| CADDO PARISH (Pine Island)— | | |
| Holly Oil Co., Thigpen-Herold 1, 15-20n-15w | * | 2283 |
| A. C. Scott et al, Noel Estate 1, 22-20n-15w | * | 2261 |
| OUACHITA PARISH (Monroe)— | | |
| Hamilton Gas Co., Parks 2, 1-19n-3e | ¶3¼ | 2171 |
| UNION PARISH— | | |
| Southern Prod. Co., W. E. Clark 1, 17-23n-1e | * | 2296 |

*Failures; †Junked; ¶Million cu. ft. gas.

## ARKANSAS PERMITS

**El Dorado, Ark.**—Only one drilling permit was issued by the Arkansas Board of Conservation last week. This is for Southern States Gas Company's Pine Woods Lumber Company 1, NE NW 10-20-22, which is already drilling.

## ARKANSAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| OUACHITA COUNTY— | | |
| Snow-Black Pet. Co., Jerry Bedford 1, 32-11-18 | * | 2410 |
| UNION COUNTY— | | |
| Lion O. R. Co., Hardy-Murphy 7, 9-16-15 | 57 | 2320 |
| Gordy Drilling & Exploration Co, Telford 1, 35-17-15 | 15 | 2211 |

*Failures; †Junked; ¶Million cu. ft. gas.

## START NEW TESTS

### Two 6000-foot wells to be drilled in Arkansas

**El Dorado.**—Two 6000-foot tests are in prospect for Miller County, southwest Arkansas, as a result of recent assembly of two wildcat blocks in that county.

Gulf Refining Company has assembled an 8000-acre block centering in Section 27-16-27 and extending into township 17, range 27, near Fouke. A total of 1500 acres of the Fouke Estate land is in the block and this carries a 6000-foot drilling obligation. The price was $3.50 per acre.

Odell Hinson, Oklahoma operator, has assembled an 8000-acre block centering in Section 21-16-28, about seven miles south of Texarkana and 12 miles west of the shallow Garland City oil field, with an obligation to drill to the oolitic lime horizon of the Glen Rose which produces oil and gas at Rodessa.

Two shallow tests a few miles outside of the Garland City field have recently been assembled. Ginther and Associates of Texarkana have 3600 acres in township 15, ranges 26 and 27 for a 3500-foot test, five miles northwest of this field. Ford and associates have assembled a block centering in Section 1-16-27 for a 3500-foot test.

C. V. Lenz who drilled the first oil producer in Miller County, is rigging for a test, A. Dean 1, NW SE 24-15-26, near the first well at Garland City which field's production centers in Sections 33 and 34-15-26.

Shell Petroleum Corporation is expected to start a test soon on a large block of acreage it has assembled in Columbia County, Arkansas. Standard Oil Company of Louisiana recently took a 4500-acre block in this county near Taylor.

### Ashley Wildcat Cores

Benedum and Trees Oil Company's Holmes 1, NE SW 4-17-5, a wildcat in Ashley County, southeastern Arkansas, about ten miles from the town of Hamburg, was coring at 3126 feet last week after testing an estimated two million cubic feet of gas and eight thribbles of water in eight minutes in a drill stem test at 3082-86 feet in what was identified as Monroe gas rock. This test logged top of Nacatosh at 2796 feet and top of the Cretaceous at 2919 feet; elevation is 183 feet. The test is on an 11,000-acre block.

The present test logged top of the Cretaceous 173 feet higher on this contact than did Texas Company's Pine Prairie 1, Section 7-17-5, which was drilled to 3656 feet.

R. P. May of Hot Springs, Arkansas, last week completed assembly of a 16,000-acre wildcat block centering in Section 29-12s-27w, Hempstead County, Arkansas, near the town of McNabb. The block is located in townships 12 and 13 south, ranges 27 and 28 west.

Due to the fact that formations rise

toward the surface in this area, there being exposures of the Nacatosh just east of this block, drilling starts in the Saratoga Chalk and a test to 5000 feet would reach the sands of the Trinity proper. A depth of 3000 feet would reach the Glen Rose oolitic lime horizon found at Rodessa at 6000 feet, as this block is located about midway between the Rodessa field and Glen Rose outcrops in Sevier County, Arkansas. The Woodbine is expected to be reached around 1400 feet. A test was drilled in Section 36-12s-27w, in 1923 to 2666 feet by George W. Summer and associates and claimed several shows of oil and gas. It logged base of anhydrite at 2180 feet. All formations from the Ozan down will be tested in the test May plans to drill.

## CORE FLORIDA TEST

**Miami, Florida.** — The South Lake Well, which the Oil Development Company of Florida is drilling for J. Ray Arnold and Associates, of Groveland, Florida, has now reached a depth of 2180 feet and the drilling is progressing at the rate of about 15 feet per day. According to William G. Blanchard, president of the Development Company, this seemingly slow rate of progress is due to coring every foot of the way for the immediate future.

## EXTEND JACKSON

**Jackson, Mississippi.**—The northeast part of the Hinds County part of the Jackson gas field was extended a quarter of a mile northeast last week by a gas well, Weaver & Alexander's McLaurin 1, SWc NW NW 30-6n-2e, completed at 2471 feet, six feet in Midway chalk; elevation was 310 feet. The well gauged 12,755,000 cubic feet of gas with rock pressure of 910 pounds.

The Mississippi legislature, now in special session at Jackson, last week adopted a concurrent resolution of both houses providing for the appointment of a special committee to gather facts and information relative to the value of the State Hospital for the Insane's land in Hinds County, as possible oil and gas producing territory.

The committee was empowered to make such recommendation as its findings warrant for an appropriation for development of this land, which totals 1320 acres and is in the northern part of the producing gas field. The field has approximately 9000 acres of gas producing acreage. No tests have yet been drilled on the state land in the field.

## MISSISSIPPI

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| GEORGE COUNTY— | | |
| Gulf Ref. Co., Dantzler Lbr. Co. 8, 10-2s-9w | * | 3350 |
| HINDS COUNTY (Jackson)— | | |
| Weaver & Alexander, McLaurin 1, 30-6n-2e | ¶12¾ | 2471 |

*Failures; †Junked; ¶Million cu. ft. gas.

## MONUMENT OFFSETS

### New drilling campaign promised by locations

NEW MEXICO — WEEKLY STAFF REPORT

**Hobbs, New Mexico.** — Non-inflammable gas, rated at 100,000,000 cubic feet daily, based on brief gauge, blew out on two wells offsetting the southernmost producer in the Monument field while drilling near the 1800-foot level and in the top section of the salt. Operations on The Texas Company's State 1-E, C SW SW 1-20s-36e, were resumed after the volume declined sufficiently to restore circulation, but some gas was in evidence while drilling ahead at 2310 feet. Gypsy Oil Company's State-South-Graham 1, a west offset, cleaned the hole of drilling fluid at 1847 feet. The gas flow was lubricated off to permit resumption of drilling to 2352 feet, where 9⅝-inch casing was cemented with 800 sacks of cement. Casing failed to set properly, and a new cement job has been undertaken.

Another long list of progressive offsets will materialize in the Monument field upon the successful completion of new locations made the past week. The Texas Company has ventured about one mile southeast of nearest production in the north extension area in starting operations on H. T. Mattern 1, C NW SW 20-19s-37e. A second location was made to drill State 1-F, C NE SE 24-19s-36e. Shell Petroleum Corporation's State 1-C, two locations north, also has moved in rig. Jeffers Oil Company's Britt-Conoco 1, which is trying for an important southeast extension, showed 200,000 cubic feet of dry gas on drill stem test at 3075-3174 feet. Production is due near the 3900-foot level.

Atlantic Oil Producing Company's State 1-H, C Lot 15, Section 5-21s-36e, situated on north border of production in the Eunice field, has been completed flowing 16 barrels hourly from lime at 3910 feet. Pressure control equipment was utilized in coring the oil section. It has a sub-sea depth of 313 feet.

Wildcat projects along the sandy-lime belt lying east of the series of fields extending from Jal to Hobbs in Lea County contributed one apparent failure and promise of a small producer. Phillips Petroleum Company and Pure Oil Company's Woolworth 1, Lease 2, C NE NW 33-24s-37e, 3½ miles east of the Cooper field, suspended drilling at 3722 feet after scoring negative results on drill stem test with packer set at 3600 feet. It has an elevation of 3265 feet, and top of brown lime was logged at 493 feet above sea level. Harry Leonard et al's C. W. Justis 1, C NW NW 20-25s-37e, is reported to have swabbed seven barrels oil daily from sandy-lime at 3397 feet, or minus 330 feet, It will be drilled deeper.

Preliminary estimate of 75 barrels of oil hourly was given Stanolind Oil & Gas Company's A. E. Meyer 1-B, C NW NE 26-24s-36e, situated on the east edge of the Cooper field, after plugging off sulphur water at 3530 feet. The hole was plugged back to 3498 feet, or 168 feet sub-sea.

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**Craig, Colo.**—The Mountain Fuel Supply Company's Georgia Kuykendahl 1, NE SE 22-12n-100w, Hiawatha Dome field, Moffat County, near here is preparing to pump for a test. The Kuykendahl well is located three-eights of a mile southeast of the Hiawatha field discovery well, Florence Wilson 1, SW NE 22-12n-100w.

In the Iles field, Stanolind Oil and Gas Company's Parkinson 16-X, SE NW NW 23-4n-92w, is drilling at 1060 feet.


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# *Good Sundance Well*

## LANCE CREEK FIELD WELL FLOWS 65 BARRELS HOURLY

ROCKY MOUNTAIN FIELDS

WEEKLY STAFF REPORT

**Casper.**—Ohio Oil Company added another good completion to the list of lower Sundance producers brought in since April in the Lance Creek field, Niobrara County, eastern Wyoming. The company's Carrie Putnam 4, SW SW 33-36n-65w, flowed 65 barrels an hour through the choke on 2½-inch tubing.

The production is coming from the lower Sundance logged at 3942-96 feet with hole bottomed at 4000 feet in the red beds. The seven-inch string is set at 3933 feet. Completion of the well was delayed three weeks in bad fishing job in which tester was frozen on top of the sand.

Huber Oil Company's Jose, CSE NE NW 6-35n-65w, same field, is coring Sundance at 3943 feet and showing good saturation. The well is located approximately a half mile southwest of the nearest Sundance producer and outside the Sundance contour according to present geological data on the field.

Continental Oil Company's Jose 3, CEL NW NE 6-36n-65w, is drilling at 3443 feet. Continental has started ditching and laying pipe for its 14-mile line from the field to railhead at Manneville, Wyo.

### Big Horn County

In the Byron field, Ohio Oil Company's Byron-Union 3, SE NW 25-56n-97w, is swabbing at 5750 feet to complete. Ohio Oil Company's P. G. Sessions 3, NWc 33-56n-97w, in the Garland field, is coring lime at 3558 feet.

In the Garland field, Peter Evanoff's McAllister 1, NW NE SE 3-55n-97w, is drilling at 2800 feet. Joan Oil Company's Howell 1, NEc NW NE 3-55n-97w, in Garland, is drilling at 1350 feet.

Yale Oil Corporation's Allen 1, SE NW SE 33-56n-97w, Garland, is drilling at 2900 feet. In the south Garland fault block, Peay Oil Company's 1, NE NE NE 15-55n-97w, is shut down at 3130 feet.

Kinney-Coastal Oil Company's No. 3 Government, SW SW NE 24-56n-98w, Garland, is rigging up to deepen to the Madison from its old depth of 4234 feet.

On Waugh Dome, California Exploration Company's No. 2 Government, SW NW 7-44n-96w, is coring at 3954 feet. This is in Hot Springs County.

### Weston County

The Osage field reports a completion and a new location this week. Albert Jones Julius Bock 11, SW NW NE 21-46n-63-w, completed in the shale at 425 feet with five barrels daily on the pump.

Glenn Taylor spotted Julius Bock 1, 3-45n-63w. Des Moines-Osage Oil Company's 11, CNL NE NE 25-46n-64w, is ready to spud. Federal Oil Company's 8, CNE SE 15-46n-64w, is ready to spud.

### Western Wyoming

Drilling operations in southwestern Wyoming show for a routine week. In the Spring Valley field, Uinta County, D. Connell's Government 5, SW NW NW 24-15n-117w, is drilling at 1036 feet.

W. D. Marshall's Government 1, NW SW SE 12-15n-118w, Spring Valley field, Uinta County, is drilling at 418 feet. In the same field, the Intermountain Petroleum Company's Union Pacific 1, SW NW SW 29-14n-118w, is testing at 1540 feet.

In the LaBarge field, Lincoln County, the Senrab Oil Company's Government 3, N SE NW 10-26n-113w, is drilling at 1036 feet.

Mid-American Oil Company's Government 3, Northwest Corner, NE SW 14-28n-92w, in the Sheep Creek field, Fremont county, cemented the eight inch casing at 1020 feet and is drilling at 1038 feet.

### South Central Wyoming

On Big Medicine Bow Dome, Carbon County, Ohio Oil Company joint test with the California Company is testing the Muddy sand in its State 2, C NW NW 36-21n-79w, which shows oil and gas. In the same field the company's Union Pacific 1 Account 1, NE SW SW 24-21n-79w, is drilling at 2090 feet in the shale.

In Carbon County, in the Rock River field, the Ohio Oil Company's Diamond Cattle Company 5, Northwest Corner SW NW 35-27n-88w, is drilling at 2842 feet.

## MOUNTAIN STATES

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **MONTANA** | | |
| GLACIER COUNTY (Cut Bank Field)— | | |
| Hannah-Porter, State 2, ne ne 12-33n-6w | 130 | 2905 |
| Consolidated Gas Co., Tribal 9, lot 5, 34-35n-6w | 65 | 2905 |
| TOOLE COUNTY (Kevin-Sunburst Field)— | | |
| M. P. F., McGowan Permit 7, se se se 8-35n-2w | 85 | 1535 |
| HILL COUNTY (Box Elder)— | | |
| Independent Natural Gas Co., Morphey 1, s sw sw 14-32n-17e | ¶6¼ | 1327 |
| **WYOMING** | | |
| WESTON COUNTY (Osage Field)— | | |
| Harkins et al, 1, se sw nw 31-46n-62w | * | 1606 |
| HOT SPRINGS COUNTY (Hamilton Dome Field)— | | |
| Argo Oil Co., Rathvon Government 1, ne sw nw 14-44n-98w | 20 | 2894 |
| **NEW MEXICO** | | |
| SAN JUAN COUNTY (Rattlesnake Field)— | | |
| Continental Oil Co., Navajo Tribal 47, cwl ne se 2-29n-19w | 152 | 741 |
| LEA COUNTY (Cooper Field)— | | |
| Skelly Oil Co., J. L. Coates 2, c se sw 3-24s-36e | 5000 | 3550 |
| LEA COUNTY (Eunice Field) — | | |
| Empire G&F Co., State 1-D, c nw ne 32-21s-36e | 1500 | 3890 |
| R. Olsen et al, State 2, c ne ne 5-21s-36e | 500 | 3890 |
| Shell, O. L. Coleman 2, c sw se 17-21s-36e | 2300 | 3961 |
| LEA COUNTY (Hobbs Field)— | | |
| Samedan Oil Co., State 1-B-25, nec sw nw 25-18s-37e | 820 | 4343 |

*Failures; †Junked; ¶Million cu. ft. gas.

## EXTEND CUT BANK

### 187-barrel well is east of field quarter mile

**Great Falls, Mont.**—Montana Power Gas Company's Maltby 1, C SE NE 8-33n-6w, an outside location extending the Cut Bank field a quarter mile east flowed and swabbed 187 barrels initial. Total depth is 2849 feet. Same company's Hall 1, CSW SE 35-36n-6w, which last week extended the field three miles north, has settled to 117 barrels daily on the pump.

A town lot failure was had in Askins 1, Lot 24, 12-33n-6w, which was abandoned after developing only 25 feet of oil in the hole bottomed at 2993 feet. Watson-Kistner's Britton 1, C SE SE 14-34n-6w, swabbed 130 barrels initial at 2905 feet. R. C. Tarrant's Yunck 2, NW 12-34n-6w, pumped 20 barrels initial from 2794 feet.

There were four locations in the Glacier County field, holding the total operations to 25, as operators in the northern Montana field are anxious to complete drilling obligations before cold weather forces shut downs. Two wells were spotted near the town of Cut Bank: R. C. Jefferies' Lukens 4, Northeast Corner, 12-33n-6w, rigging up; and Montana Power's Connolly 1, NW NW 7-33n-5w.

P. M. K. Oil Company is spudding at 50 feet in Haglund, Sr. 2, NW NE 14-34n-6w, R. C. Tarrant's Jones 2, NW SW 31-34n-5w, has rig up.

### Kevin-Sunburst Field

Potlatch Oil and Refining Company brought in a gas well in the Kevin-Sunburst field, Toole County, northern Montana. The well, Fee 7, NW NW SE 21-34n-1w, is flowing 1,600,000 cubic feet of gas daily at 1295 feet.

Seabrook 10, SW SW SE 19-35n-2w, a near completion of Pfabe and Engleking, will acidize with 1000 gallons of acid at 1511 feet. Stock Bros.' Hagerty 3, NW SW SW 13-35n-2w, a near completion, will acidize at 1524 feet.

Huso Bros.' Government 3, SW NE SE 14-35n-3w, a new location in the west end of the field last week, is drilling at 775 feet.

# *Two Elwood Wells*

## NEW COMPLETIONS SHOWING LARGE WATER CUT

WEEKLY STAFF REPORT

**Los Angeles.**—Two more wells have been placed on production in the Elwood field, located on the ocean front and in the ocean about 12 miles west of the town of Santa Barbara, Santa Barbara County.

Barnsdall Oil Company-Rio Grande Oil Company's Bell 18 was completed on October 10 for an initial production of 1905 barrels per day, gross, cutting 48.0 percent water. This is an unusually high water cut for wells in the area so near the center of the Elwood structure, although wells farther down the flanks are showing similar water encroachment. Bottom of this well is at 3690 feet, with 10¾-inch water string cemented at 3410 feet.

Caroline Spalding's Permit 93-11, located approximately 1000 feet out beyond tideland, was brought in for an initial production of 1420 barrels per day, 34.8 gravity oil, cutting 36.0 percent water. Oil production has now increased to 2675 barrels per day and water cut has decreased to 23.0 percent. This well is bottomed at 3657 feet, with 10¾-inch water string cemented at 3423 feet.

The Elwood field, discovered July 26, 1928, by Barnsdall Oil Company's Bell 1, is second in importance among the California coastal oil fields, Ventura Avenue field ranking first. Production is from the Vaqueros (Lower Miocene) formation mostly, although a few of the wells are bottomed in the Sespe formation, and the structure is a faulted anticline.

Due to the ease of access and the high quality of this oil (about 35.0 degrees average gravity), there has been a greater demand for this crude than from inland fields where transporting costs are high, and the water encroachment is fast becoming a serious problem.

There are now 81 potential producers in the field, with an average of 45 wells on production during the first six months of 1935. During that period a total of 1,925,000 barrels of oil were produced, which was accompanied by 835,000 barrels of water. This gives an average of 305 barrels per day of oil per producing well, and 132 barrels of water; or an average percentage of 69.7 oil and 30.3 percent water.

It is also of great interest to note that potential production from the lower zone (Sespe formation) now seems of little importance. This zone, when first discovered about four years ago, was expected to be one of the best reserves in California. There have now been eight wells carried to the Sespe zone, all in widely scattered portions of the field, and only three of them have been successful in developing commercial production. No accurate figures are available on the water content of oil from this lower zone but it is known to be comparatively high, in fact, very high when it is taken into consideration that these wells are still drawing on the first flush production. During the month of August, 1935, a total of 25,857 barrels was produced from this zone by three wells, an average of 278 barrels per day per well.

In addition to the small production and high water content, there are also several other features that have discouraged the development of the lower formations. First in importance is the prohibitive cost of drilling these wells. Most of the best producers are out in the ocean and, in addition to the actual cost of drilling, there are piers and foundations to be constructed. Average cost of the piers per well amounts to about $100,000, with another $30,000 added for derrick and equipment foundations.

Another discouraging feature of this development work is that each well presents an individual problem. Due to the badly faulted condition of the lower formations, it has been impossible to correlate the wells, and each well drilled so far has been virtually a wildcat.

A third difficulty lies in the fact that it is practically impossible to maintain circulation in these fractured and faulted zones, which materially increases the hazards of drilling.

## CALIFORNIA
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| KETTLEMAN HILLS— | | |
| Kettleman No. Dome Assn., No. 56-20J | 1860 | 8707 |
| Standard Oil Co., No. 76-19J | 1960 | 8602 |
| KERN FRONT— | | |
| Bishop Oil Co., McDonald 6 | 165 | 2145 |
| C. C. M. Oil Co., No. 48 | 305 | 2110 |
| Standard Oil Co., No. 4 | 205 | 2625 |
| PREMIER— | | |
| Ohio Oil Co., No. 7 | 300 | 2806 |
| ROUND MOUNTAIN— | | |
| Shell Oil Co., Jewett 3-5 | 1410 | 2110 |
| EL CAPITAN— | | |
| Shell Oil Co., Covarubias 1-6 | 220 | 1305 |
| ELWOOD— | | |
| Barnsdall-Rio Grande, Bell 18 | 1780 | 3690 |
| Caroline Spalding, Permit 93-11 | 2675 | 3657 |
| SANTA MARIA— | | |
| Union Oil Co., Cal. Coast 15 | 60 | 3985 |
| RINCON— | | |
| Continental Oil Co., Grubb 4 | 1570 | 6949 |
| SEMITROPIC— | | |
| Fullerton Oil Co., Barnsdall 32 | * | 4028 |
| Standard Oil Co., Smith Fee 1 | * | 4240 |
| Williams 1 | * | 4580 |
| Randolph Com. 1 | * | 2553 |
| LONG BEACH— | | |
| Mines Oil Co., No. 3 | 75 | 3500 |
| San Lorenzo Oil Corp., No. 1 | 250 | 4120 |
| DOMINGUEZ— | | |
| Union Oil Co., Carson 7 | 105 | 7205 |
| PLAYA DEL REY— | | |
| Andrew Lucas, Inglewood Ext. 1 | * | 6637 |
| SANTA MARIA— | | |
| Union Oil Co., LeRoy 1 | * | 3436 |

*Failures; †Junked; ¶Million cu. ft. gas.

## TULARE LAKE TEST

**Los Angeles.**—Milham Exploration Company is preparing to drill its No. 1 test on a large block of property recently leased from the West Tulare Land Company on the westerly edge of the dry bed of the old Tulare Lake, Tulare County.

The new location will be in Section 5-22s-19e, approximately eight miles easterly from the North Dome of Kettleman Hills, in an area where numerous tests have been drilled. None of the wells drilled so far have been able to develop oil production, although a few non-commercial gas zones have been encountered. However, most of the old wells were carried only to depths ranging from 1800 to 3000 feet and it is expected that Milham will make a deep test of its well.

## PUENTE FAILURE

**Los Angeles.**—Another test of the Puente Hills area, located about 25 miles east of Los Angeles, was a failure on production test last week.

Pressel-Perry-Tull's Baird 1, Section 30-2s-9w, started swabbing on October 9, and fluid recovery has been practically all water, fluid level standing fairly constant at 3800 feet.

Depth of this well is 4535 feet, with five-inch casing cemented at 4030 feet, and 2½-inch tubing hung at about 4000 feet. Operators plan to continue the swabbing test for several days.

Numerous wells have been drilled throughout this general area, most of which, as in this instance, had numerous thin streaks and stringers of oil sand, but none of which were ever able to develop commercial production.

## PACIFIC MOVEMENT

**Los Angeles.**—Offshore movements of all California petroleum products for the first nine months of 1935 show a decline when compared with the same period in 1934, due almost entirely to decline in tanker shipments of fuel oil to the East Coast. During the same period in 1935, the offshore movement of crude oil and gasoline showed a gain over 1934.

It has been estimated that movement

of all products from California in September reached a total of 3,730,278 barrels against a total of 4,718,761 barrels the same month last year. The preliminary estimates were compiled by the Oil Producers Agency of California.

The movement offshore of fuel oil in September was 1,402,076 barrels compared to 2,323,719 barrels same month last year. Pacific foreign drew 1,278,653 barrels of the total fuel oil movement last month, which showed a small decrease when compared with same month last year.

Pacific foreign drew 2,900,663 barrels of the total of all products moving in September, consisting mostly of fuel and crude oil.

## SANTA MARIA

**Los Angeles.**—Union Oil Company's Le Roy 1, wildcat project located in Section 16-10n-34w, about 1½ miles west of the town of Santa Maria, Santa Barbara County, has been abandoned.

This well was carried to 3436 feet, bottomed in hard shale, without encountering any zones of oil or gas bearing formations, and was abandoned without a production test having been made.

At the time this test was started it was considered one of the most promising wildcat ventures drilled in the coastal district for some time.

# *Water Intrudes*

## NEW WELLS ON NORTH DOME ARE MAKING WATER

**Los Angeles.**—Two new wells were completed in the North Dome of Kettleman Hills, Fresno County, last week.

Kettleman North Dome Association's No. 56-20J, located in Section 20-21-17, was completed on October 5, for an initial production of 1860 barrels per day, 36.9 gravity, 0.8 percent water cut, and 1,580,000 cubic feet of gas. Total depth is 8707 feet, plugged back to 8202 feet, and 9⅝-inch casing is cemented at 7871 feet. A 6⅝-inch liner is landed on top of the plug, perforated from 7910 to 8020 feet and from 8125 feet to 8202 feet, and cemented through perforations at 7910 feet and at 8125 feet.

Standard Oil Company's No. 76-19J, Section 19-21-17, made an initial production of 7630 barrels per day, 32.4 gravity, 1.1 percent cut, 160/1240 pounds pressure, and 5,000,000 cubic feet of gas. Depth of this well is 8620 feet, plugged back to 8390 feet, and 9⅝-inch casing is cemented at 7821 feet. A seven-inch liner is landed at 8390 feet and perforated 8390 to 8374 feet and 7697 to 7827 feet, and cemented through perforations at 8366 feet and 8028 feet.

It is interesting to note that in this northwesterly end of the famous Kettleman North Dome, where the largest wells were obtained during 1930 and 1931, it is now necessary to plug off several hundred feet of the formations that were free from water four years ago.

Another point of still greater interest is the fact that in most of his area each of the intermediate zones now carry varying amounts of water, necessitating from one to three more cement jobs than in the earlier completions, and leaving considerably less zone open to production. It has been noted that from 20 to 40 percent less perforated liner is being used in present day completions, as compared to flush production days of 1930 and 1931.

## DOS PALOS TEST

**Los Angeles.**—Pure Oil Company is preparing to drill a second test of the Dos Palos district, located in the extreme northwestern portion of Madera County.

The new project, Chowchilla 2, will be drilled in the north-central portion of Section 8-10s-14e, and rig is now being skidded from Chowchilla 1, located about one half-mile to the northwest, in Section 7-10s-14e.

This second test is on the same structure as Chowchilla 1, which was completed on April 2, 1935, for an initial production of 12,000,000 cubic feet per day rate of dry gas, from a plugged depth of 8125 feet. Total depth was 8375 feet, but, owing to water trouble from formations on bottom, it was necessary to plug back about 250 feet.

## DRILLING INCREASE

**Los Angeles.**—In spite of adverse conditions that have prevailed in California since the code was thrown into the discard, drilling activity is showing a marked improvement over last year.

To September 28 this year, there have been 755 new wells started compared to 441 during the same period in 1934, 477 same time in 1933 and 228 for 1932. The total given for the nine months in 1933 was late in year reduced due to cancellations of notices of new starts.

Deepening and redrilling jobs at old wells are also this year running ahead of last year. To September 28 this year this class of operations numbered 605, compared to 476 same period last year.

## SAN JOAQUIN

**Los Angeles.**—Amerada Petroleum Corporation has 8⅝-inch casing standing cemented at 4005 feet in its third test of the Tracy gas area, San Joaquin County, 35 miles east of the San Francisco Bay region.

Tracy 31-22, Section 22-2s-5e, is bottomed at 4087 feet in sandy shale. On a drill pipe test, with bottom at 4041 feet, this well made an estimated 20,000,000 cubic feet of gas; and with the additional 46 feet of zone open, it is expected that a much larger producer will result when completed from the lower depth.

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## CRYSTAL FAILURES

### More closely define area to north and northwest

WEEKLY STAFF REPORT

**Mt. Pleasant.**—Three failures north and northwest of the main Crystal-Ferris (Montcalm County) producing area more closely defined the field during the week while at the same time a "nosing" of the productive area to the northeast also was indicated. Production ranging up to 55 barrels an hour from Dundee lime was found on the northeast flank.

Two offsets to United Producer's Conners 1, 11n-5w-26, are scheduled for completion within the next week which are expected to shed new light on whether the Conners is a "freak" or producing from another area not directly a part of the main Crystal-Ferris field. The Conners brought in three months ago initialed 960 barrels from the Dundee lime at a depth of 3240 feet as against production a mile and a half south from 40 to 50 feet higher.

During the week Easter Gulf completed Conners 1, 11n-5w-35, a half mile south of United-Conners as a Dundee failure indicating that the areas are separated.

A strong but guarded drilling play was getting underway in Ogemaw County this week in the area of Fortney Oil Company's State 1, 21n-2e-1, brought in three weeks ago at 1796 feet in Traverse lime with an initial flow of 500 barrels an hour. The well, according to the owners has produced

## MICHIGAN

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ALCONA COUNTY— | | |
| V. R. Kirkham, Jozwiak 1, 28n-9e, nw se nw-25 | * | 381 |
| Lund 1, 27n-9e, ne ne ne-23 | * | 588 |
| MECOSTA COUNTY— | | |
| Wiser Oil Co, Wilson 1, 13n-7w, c nw sw-29 | ¶8 | 1320 |
| Gordon Oil Co., Gar-Withey 1, 13n-7w, c se se-33 | ¶6 | 1300 |
| MONTCALM COUNTY— | | |
| J. W. Leonard, Tow 1, 10n-5w, se ne se-3 | 1450 | 3186 |
| Daily Crude Oil Co, Tow 3, 10n-5w, nw nw sw-2 | 1600 | 3190 |
| Gordon Oil Co, Strait 2, 10n-5w, se se nw-3 | 1500 | 3186 |
| McClanahan Oil Co, McCracken 1, 10n-5w, nw ne se-4 | 125 | 3214 |
| Eastern Gulf, Conners 1, 11n-5w, nw nw nw-35 | * | 3240 |
| T. F. Caldwell, Towle 1, 11n-5w, se nw sw-34 | * | 3236 |
| Bailey 1, 11n-5w, ne nw sw-33 | * | 3360 |
| Flint 3, 11n-5w, nw sw sw-35 | 1200 | 3200 |
| Burnstein Oil Co, Keel 5, 11n-5w, se se se-35 | 1150 | 3190 |
| Dourty & Markey, Fisher 1, 11n-5w, sw sw sw-36 | 900 | 3197 |
| ST. CLAIR COUNTY— | | |
| Marine City, DeSnyder 1, 4n-16e, nw nw sw-34 | * | 670 |

*Failures; †Junked; ¶Million cu. ft. gas.

todate approximately 75,000 barrels of oil against back pressure. The well is on a Shell Petroleum Corporation farm out lease. Sun Oil Company has an 80-acre offset.

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Michigan crude oil production averaged 55,000 barrels per day for the week ending October 12, A. J. Weideman, field proration umpire announced. This established a new high for the state, and based on preliminary estimates moved Michigan into the front rank of Eastern state oil areas.

All but 8000 barrels of the production is coming from the Porter-Yost pool in Midland County, and the Crystal-Ferris pool in Montcalm County. Each are averaging about 23,500 barrels per day.

## GAS LINE PERMITS

**Mt. Pleasant.**—Final hearing on 11 natural gas line proposals, several of which are interlocking, is scheduled for October 23, in Lansing, Michigan, by the Michigan Public Utilities Commission.

Hearings were started on October 9, but adjourned after a day hearing in which only part of the testimony was introduced.

Consumers Power Company seeks a permit to construct a 70-mile pipe line from the Millbrook-Belvidire field to Lansing, Michigan, where the utility now operates an artificial gas distribution system. A second application made by A. Thomas Sarkisson is to be heard which seeks the right to construct a gas line to Detroit. These represent the chief applications having important bearing on the state natural gas industry, others being for short lines or changes in previously approved set-ups.

Opposition to the Consumers proposal developed in the October 9 hearing from a group of independent gas producers in the Millbrook area who charged that the contract would give the utility a throttle hold on the entire state gas industry. A protest also was made against the set-up which includes a gathering company and a 3 cent per 1000 gathering charge. Under the contract operators would receive 12 cents per thousand at the well-head while the field pressure average 300 pounds or more. The price would be dropped to nine cents if booster stations had to be constructed. Operators are holding out for 15 cents at the well.

## START OIL LINE

**Mt. Pleasant.**—Construction on a 140-mile 8-inch welded steel pipeline from the Crystal field to Toledo, Ohio, was started this week by Simrall Pipeline Corporation in conjunction with Standard Oil Company of Ohio, which has purchased an interest in the Simrall.

Franklin Tool Company of Mt. Pleasant has the construction contract and expects to complete the line within 45 days. Construction is being started both at Toledo and at the Crystal field.

## EASTERN STATES

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **PENNSYLVANIA** | | |
| GREENE COUNTY— | | |
| Penn Ohio Oil Co., Clutter 2 | ¶ | .... |
| **LIMA** | | |
| WOOD COUNTY— | | |
| Frank Wolf, Wolf 1 | * | .... |
| ALLEN COUNTY— | | |
| H. F. Kelley & Co., Martin Bros. 1 | 5 | .... |
| Michigan & Ohio Oil, Clark 1 | 8 | .... |
| HARDIN COUNTY— | | |
| F. E. George & Co., Thompson 1 | ¶ | 1311 |
| **CENTRAL OHIO** | | |
| ASHLAND COUNTY— | | |
| Robison & Co., Allerholt 1 | * | 721 |
| Ohio F. G. Co., Jones 1 | * | 2911 |
| COSHOCTON COUNTY— | | |
| Preston Oil Co., McCamant 2 | 83 | 3153 |
| M. C. Waltz, Lawrence 10 | 6 | 752 |
| Griffith, Harmer & Co., Reed 1 | 15 | 2975 |
| HOLMES COUNTY— | | |
| Bell Bros., Craig 1 | ¶ | 824 |
| KNOX COUNTY— | | |
| H. E. Perkins, Underwood 1 | 2 | 3173 |
| Delbert Hyman, Horn 1 | * | 772 |
| H. E. Perkins, Leply 1 | ¶ | 2826 |
| Upham Gas Co., Wheaton 1 | * | .... |
| STARK COUNTY— | | |
| H. & E. Fawcett, Fawcett 1 | ¶ | 4611 |
| HOLMES COUNTY— | | |
| Lydic O&G Co., McDowell 2 | ¶ | 4579 |
| WAYNE COUNTY— | | |
| Nelson & Co., Lewis C. Iches 1 | * | 630 |
| LICKING COUNTY— | | |
| E. J. Edmon, Smith 2 | * | 628 |
| MEDINA COUNTY— | | |
| Carl Miller, Miller 8 | ¶ | .... |
| Pete Garapick, Ziolek 1 | * | 825 |
| MARION COUNTY— | | |
| Sunnyside Hospital, Fee 4 | ¶ | .... |
| **SOUTHEASTERN OHIO** | | |
| NOBLE COUNTY— | | |
| Theo. Brown & Co., Drinko 2 | ¶ | 307 |
| MONROE COUNTY— | | |
| Monroe Oil Co., Kemp 1 | ¶ | .... |
| Myers & Co., Baker 4 | 8 | 1320 |
| F. O. Parks, Schmeeberger 3 | * | 1282 |
| MEIGS COUNTY— | | |
| Rutland Gas Co., Burney 1 | ¶ | 866 |
| Turney & Co., McKensie 1 | ¶ | 2030 |
| Jividen O&G Co., Houston 1 | ¶ | 2100 |
| Roy Holmes & Co., Gilliland 1 | ¶ | 1907 |
| PERRY COUNTY— | | |
| Mid-East Gas Co., Ansel 1 | ¶ | 3170 |
| VINTON COUNTY— | | |
| Ohio F. G. Co., Ousley 1 | * | 2753 |
| Vinton Star Gas Co., Myers Hrs. 3 | ¶ | 957 |
| WASHINGTON COUNTY— | | |
| D. T. Orndorf, Roe 6 | * | 1533 |
| Anderson & Co., Anderson 1 | * | 1275 |
| McTaggart & Co., Woodruff 27 | * | 1211 |
| Speary O&G Co., Leyde 4 | 10 | 1315 |
| Ohio F. G. Co., Breckenridge 2 | * | 1901 |
| Wooster & Wooster, Fleeman & Parks 5 | * | 840 |
| **INDIANA** | | |
| GIBSON COUNTY— | | |
| Indiana S.W. Corp., Louisville Joint Land Bank 1 | * | 411 |
| Louisville Land Bank 2 & 3 | * | 435 |
| DAVIESS COUNTY— | | |
| Delmar Patterson & Co., Ageton 3 | * | 697 |
| PIKE COUNTY— | | |
| C. M. Amsler, Traylor 1 | * | .... |
| MARTIN COUNTY— | | |
| Trinity O&G Co., Thompson Hrs. 1 | * | .... |
| LAWRENCE COUNTY— | | |
| Homer Ragsdale, Imler 2 | * | .... |
| SPENCER COUNTY— | | |
| Big Town O&G Co., Painter 1 | * | .... |
| V. S. Hollingsworth, Heinze 1 | * | 622 |
| Petroleum Explor. Corp., Balback 6 | * | .... |
| Balback 7 | 30 | .... |
| Balback 8 | * | .... |
| SULLIVAN COUNTY— | | |
| W. A. Sage, Glossa Eads 1 | * | 405 |
| **WEST VIRGINIA** | | |
| CABELL COUNTY— | | |
| R. H. Adkins & Co., Fellur 1 | ¶ | 3675 |
| ROANE COUNTY— | | |
| Big Four Drilling Co., Harshberger 1 | ¶ | 1731 |
| H. S. Adams & Co., Norman 1 | 10 | 1700 |
| Henderson & Co., Ball 3 | 10 | 1842 |
| MONONGALIA COUNTY— | | |
| Carnegie Nat. Gas Co., Bond 1 | ¶ | 3100 |
| RITCHIE COUNTY— | | |
| West Va. Farm Oil Co., Burk 19 | 2 | 1847 |

*Failures; †Junked; ¶Million cu. ft. gas.

# THE OIL WEEKLY REPORT ON IMPORTANT *Wildcat Tests*

## ALABAMA

BALDWIN COUNTY—U. S. Government 2, (Ft. Morgan Reservation), wocs 10-in csg 223 ft.

LAMAR COUNTY—DeSoto O&G Co.'s Gardner 1, nw nw 22-15-16, dr 4300 ft.

MOBILE COUNTY—J. C. Prine's King 1, n½ ne 4-1n-4w, trying to make ds test 3085-3115 ft Wilcox sand.

## ARKANSAS

ASHLEY COUNTY—Benedum & Trees Oil Co.'s Holmes 1, ne sw 4-17-5, elev 183 ft, top Cretaceous 2919 ft, tested est 2 mil ft gas and 14 thribbles water in 8 minutes 3082-86 ft, Monroe gas rock, core 3126 ft. Texas-Seaboard Oil Co.'s Bynum Cooperage Co. 1, se sw nw 34-17s-4w, sd for drill stem 2005 ft.

COLUMBIA COUNTY—Southern States Gas Co.'s Pinewoods Lbr. Co. 1, ne nw 10-20-22, dr 1795 ft.

DALLAS COUNTY—McCall & Kelly's R. Owen 1, nw sw 26-10-16, elev 360 ft, top Nacatosh 1240 ft, claimed so, core gummy shale 1460 ft.

HEMPSTEAD COUNTY—Geo. L. Glass' May B. O'Brien 1, ne sw 32-12s-32w, dk and mir. F. W. Martin's Lafferty 2, se nw 17-14-27, rur.

LA FAYETTE COUNTY — Earl F. Fox's Coleman 2, ne ne 30-16-24, wocs 10-in csg 135 ft. Leach et al's Bodcaw Lbr. Co. 1, 20-16-23, lcn. Joe Modisett et al's Frost Lbr. Co. 1, sw sw 29-19-24, elev 261 ft, top Arkadelphia 1653 ft, 9⅝ in csg 2140 ft, dr 3164 ft, sandy lime. Transportation Pet. Co.'s Cochrane 1, ne se 26-19-25, Annona chalk 2337-2690 ft, dr 3078 ft shale. Wadley et al's Red River Lbr. Co. 1, 19-16-23, lcn. S. H. Riggs et al's DuBose 1, se sw nw 35-16-24, hole clean, sd wo 2600 ft in new hole, old td 2817 ft.

MILLER COUNTY—King Oil Corp.'s G. W. Crank 1, sw ne 19-16-25, dr 2402 ft. C. W. Hays et al's State of Ark. 1, sw se ne 31-15-25, spd cemtd 10-in csg 129 ft. C. V. Lenz's A. Dean 1, nw se 24-15-26, spd. McAlester Fuel Co.'s Cook 1, 18-20-27, mim. L. H. Mahan et al's Miller L&T Co. 1, sw se 29-18-27, 10-in csg 150 ft. Travis & Wair's Capps 1, 11-20-28, lcn.

MONROE COUNTY—Beaver Pet. Co.'s Stinson 1, se sw 27-4-2, 10-in csg 216 ft. Monroe Oil Co. Inc.'s Harvey 1, se se 19-1-1, spd dr 1300 ft.

OUACHITA COUNTY — Benedum & Trees Oil Co.'s Brigham 1, dr 2151 ft shale and gumbo. Snow-Black Pet. Co.'s Jerry Bedford 1, sw sw 32-11-18, fsg ds, td 1938 ft.

POINSETT COUNTY—Rockwell Dev. Co.'s Fee 1, 13-11n-3e, dr 2011 ft gumbo, shale and sand.

SEVIER COUNTY—Pendleton & Vaughan's Dierks Timber & Coal Co. 1, nw ne 14-10-29, dr 450 ft.

SEVIER COUNTY—Pendleton & Vaughan's Dierks Timber & Coal Co. 1, nw ne 14-10-29, dr 450 ft.

UNION COUNTY—Ark.Southern Oil Co.'s Laney 1, 32-19-16, 10-in csg 176 ft. Ohio Oil Co.'s Sam Oliver 2, nw sw sw 7-17-13, lcn. Proetz & Richardson's Calion Lbr. Co. 1, 10-16-14, sd 3500 ft.

## CALIFORNIA

### KERN COUNTY

ARVIN—General's Mattson 1, 1-32-29, dr gray sandy shale 8598 ft. Hall-Baker Co.'s McGowan 1, 20-31-30, dr sand 1430 ft.

BUENA VISTA LAKE—Ohio's K. C. L. A-3, 31-31-26, dr shale 3520 ft. Shell's B. V. A. 1, 9-32-25, dr gray sand and shale 9108 ft.

CALIENTE—O & H Oil Co.'s O & H 1-A, 32-30-30, dr gray sand 683 ft.

COMANCHE—Comanche Oil Co.'s No. 1, 15-32-29, rep equip 4551 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 2177 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Cumberland 2, 17-26-18, co 3260 ft.

EDISON—Bauer Oil Co.'s Bauer 1, 21-30-29, dr sandy shale 3455 ft. Navy Oil Co.'s Caravel 1, 19-30-30, dr gray sand 628 ft.

FAMOSA—Ausbrit Oil Corp.'s No. 1, 20-27-27, rig.

GRAPEVINE—Silver Gate Co.'s Tejon 1, 7-10-19, dr 2560 ft, oil showings 2545 to 2549 ft.

LOST HILLS—Standard's United 1, 2-26-20, td 5816 ft, wocs 9⅝-in at 5766 ft.

McDONALD ANTICLINE—R. E. Bering's Maylan 2, 12-28-19, rigged and sd.

McFARLAND—John H. Webb's Alta 1, 16-26-26, sd 2486 ft.

SAN EMIDIO—Ohio's K. C. L. C. 11-49, 11-11-22, dr sand and shale 5226 ft.

SO. BUTTONWILLOW—Doyle Pet. Corp.'s No. 1, 5-30-24, sd 5265 ft.

SOUTH DOME—Continental's Gatchell 28-7, 7-25-20, td 7849 ft, flowing 3100 bbls hot salt water.

SO. ROUND MOUNTAIN—Standard's M & T 1, 3-29-29, lcn, graded.

TRICI—Standard's Balz 1, 33-24-23, spud.

### MISCELLANEOUS

FRESNO COUNTY—Taft Well Dr. Co.'s Kreyenhagen 1, 33-22-16, dr hard shale 4837 ft.

KINGS COUNTY—Milham Explor. Co.'s West Tulare Land Co. 1, 5-22-19, rig.

MADERA COUNTY—Pure's Chowchilla 2, 8-10-14, skidding rig from No. 1.

SAN JOAQUIN COUNTY—Amerada's F. D. L. 1, 15-2-5, dr hard shale 8069 ft; Tracy 31-22, 22-2-5, td 4087 ft, dr pipe test showed 20,000,000 cu ft gas; r to set casing.

TEHAMA COUNTY — Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, td 5032 ft, to deepen.

TULARE COUNTY—Geo. Clark's May 1, 31-23-28, rigging up.

MONTEREY COUNTY—Shell's Branch 1, 34-24-10, dr black shale streaks brown shale 5702 ft.

### SANTA BARBARA COUNTY

CARPINTERIA—Santa Barbara O&G Co.'s Brice 1, 29-4-25, dr with cable tools.

GOLETA—Shell's Hollister 2, 10-4-29, spud Oct. 7, cemented 8⅝-in 265 ft.

LOMPOC—M. J. Freeman's La Brea 1, 11-7-33, dr shale 1363 ft.

SANTA MARIA—O. C. Field Gaso. Corp.'s No. 1, 28-10-33, spud Oct. 6, dr. Union Oil Co.'s LeRoy 1, 16-10-34, abn 3436 ft.

SUMMERLAND—Marmonte Oil Co.'s No. 1, 16-4-26, rur.

### VENTURA COUNTY

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, td 1083 ft, rur. Union Oil Co.'s Dryden 10, 12-3-20, dr sand and shale 4637 ft.

FILLMORE—Texas Co.'s Unit Plan 2-1, 29-4-19, dr sand and shale 4388 ft.

OXNARD—General's McGrath 1, 26-2-23, dr sand and shale 7422 ft.

PADRE CANYON—Continental's Hobson 1, 15-3-24, digging sump.

SHIELL'S CANYON—Bankline Oil Co.'s Calumet B-1, 3-3-19, dr shale 3390 ft. Texas Co.'s Shiells 128, 4-3-19, td 7423 ft, plug 4081 ft, perf 8⅝-in at 3875-78 ft, 3840-55 ft and 3715-40 ft, tubing to 3579 ft, to circulate, sg.

SIMI—Jas. S. Hull's No. 1, 2-2-18, dr shale 934 ft. Paloma Oil Co.'s Paloma-Marr 1, 12-2-18, td 2740 ft, wocs 6⅝-in at 2640 ft.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, dr hard shale 6684 ft, sg.

### SOUTHERN CALIFORNIA

BREA CANYON — Pressel - Perry - Tull's Baird 1, 30-2-9, td 4535 ft, bailing water and scum of oil.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, td 3053 ft, to set 7-in.

EAST MONTEBELLO—Wilshire Annex Oil Co.'s Baldwin 1, 11-2-11, dr sand and shale 2151 ft.

EL SEGUNDO—Larco Oil Co.'s Van 1, 12-3-15, dr lower conglomerate 7590 ft, os 7499 to 7545 ft, checking 190 ft lower than Republic No. 1.

HAWTHORNE—Lennox Oil Co.'s No. 1, 9-3-14, rig.

KRAEMER—Standard's Yorba Com. 1, 36-3-9, set 26-in at 58 ft.

LAWNDALE—Sovereign Oil Corp.'s Ben Long 1, 22-3-14, td 6069 ft, redr at 3545 ft.

PICO—Frontier Oil Co.'s No. 1, 12-2-12, sd 5246 ft.

PUENTE—No. American Oil Consolidated's Smith 1, 30-1-10, dr sand and shale 2890 ft. York Oil Co.'s Sentous 1, 2-2-10, lcn.

RICHFIELD—Leaseholders Dev. Co.'s Vejar 1, 26-3-9, to 4065 ft, co to deepen.

SANTA ANA—Continental's Santa Ana Com. 1, 14-5-10, dr hard sand 1900 ft.

SAUGUS—International Oil Developers' Powell 2, 34-5-16, dr shale 554 ft.

TOPANGA CANYON—Monarch Pet. Co.'s Sylvia Park 1, 5-1-16, sd 212 ft.

TORRANCE—Eyers Pet. Corp.'s No. 1, 20-4-13, sd 50 ft. Pioneer Holding Co.'s Pioneer 1, 33-3-14, dr.

SAN BERNARDINO COUNTY—Equitable Pet. Explor. Co.'s No. 1, 11-10-5, dr hard shale and conglomerate 1537 ft. Hillman-Long Co.'s Pellissiers 1, 2-3-8, dr hard sand 2391 ft.

## COLORADO

ADAMS COUNTY—Riddle Petroleum Co.'s Baxter 1-C sw 2-3s-6w, working on water well at 1260 ft.

ARCHULETA COUNTY—Wm. E. Hughes Estate Fee 2, sw 24-3n-2e, swabbed 110 bbls oil, testing.

BOULDER COUNTY—Leslie R. Steele et al's Maxwell 1, sw ne nw 24-1n-71w, dr 2009 ft in dark gray shale.

JACKSON COUNTY—Continental Oil Co.'s Hoye 3, nwc ne 34-9n-78w, coring Dakota sand at 5053 ft, top at 4962 ft.

JEFFERSON COUNTY — Ruby Hill Oil Co.'s Braden 1, se se 24-4s-69w, sd 4160 ft for repairs.

MOFFAT COUNTY—Mid-Colorado Pet Co.'s Ohmholt 1, nw ne 29-4n-87w, set 8¼-in csg at 2725 ft and sd.

PARK COUNTY — South Park Oil Co.'s State 1, se se sw 16-11s-17w, dr 3650 ft; carrying 6⅝-in csg at 3585 ft.

## FLORIDA

HILLSBOROUGH COUNTY—Southern Pet. Co.'s Mizell & Williams 1, se ne 4-32s-21e, elev 120 ft, sd high water while trying recover hung ds at 1000 ft, td 2465 ft.

JACKSON COUNTY—Ray L. Estabrook et al's fee not given, ne nw se 15-5n-9w, lcn.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, core hd lime 2071 ft.

PINELLAS COUNTY—Dr. Edw. A. Hill et al's W. J. Meyers 1, ne ne 2-27s-25e, re-bldg dk.

POLK COUNTY—Dr. Edw. A. Hill et al's Polk Co. Lbr. Co. 1, nw ne 32-25s-25e, dk.

## KANSAS

BARTON COUNTY—Suppes & Witts' Hayes 1, nw nw nw 7-16s-15w, td 3534 ft, D&A. Torrey & Feaster et al's Feist 1, ne ne se 29-18s-11w, sd 3375 ft. Lario et al's Peter 1, nw nw nw 24-20s-11w, td 3291 ft, pumped 305 bbls oil

### ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg.—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so & g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

12 hrs. Lario et al's Smith 1, sw nw nw 26-18s-13w, cellar. Price et al's Ehrlich 1, nw nw se 10-16s-13w, dr 3349 ft. Continental Oil Co.'s Lamatsch 1, ne ne ne 26-17s-12w, lcn.

BUTLER COUNTY—Western Kansas Prod & Ref Co.'s King & Marshall 1, nw nw sw 11-28s-6e, td 3051 ft, pb 3049 ft, no test. Mohawk Oil Co.'s Overstreet 1, nw nw nw 19-26s-8e, td 5867 ft, est 40 bbls oil. Palmer et al's Ellis 1, ne ne ne 7-25s-4e, dr 2265 ft.

COWLEY COUNTY — Wakefield et al's Auman 1, se se ne 32-33s-3e, swab 35 bbls oil. Winkler-Koch et al's Harlan 1-B, cnw ne 13-31s-7e, dr 1400 ft. Earl Wakefield's Hanna 1, ne ne sw 2-31s-4e, dr 1700 ft. Shawver et al's Hanna 1, ne nw se 29-30s-3e, dr 1775 ft. Johnson's Ferguson 1, nw sw se 17-30s-8e, dr 400 ft.

ELLIS COUNTY — Helmerich & Payne et al's Kuhn 1, nw sw ne 16-13s-20w, sd 3900 ft. Lewis Roark et al's Bemis 1, se se se 16-11s-17w, est 100 bbls oil per hr. Palmer & Storm King's Bowlby 1, ne nw nw 13-11s-16w, dr 3285 ft. Twin Drlg Co.'s Goetz 1, sw sw se 3-14s-17w, spd & sd.

ELLSWORTH COUNTY — Franco Central Pet Co et al.'s Frevert 1, sw sw sw 8-17s-10w, td 3355 ft, pb 3346 ft, D&A. Keith et al's Schepmann 1, sw sw nw 22-17s-10w, td 3375 ft, D&A. Slick, Pryor & Lockhart et al's Sturn 1, nw nw sw 26-17s-10w, ru. Gypsy & Texas Co.'s Lapham 1, sw sw sw 27-16s-7w, td 162 ft, wocs. Tom Palmer's Splitter 1, nw ne se 17-17s-8w, dr 430 ft.

GRAHAM COUNTY—Helmerich & Payne's Stites 1, csw sw 8-19s-22w, pb 3868 ft, shot 30 qts, co. Vickers Pet Co et al's Hutton 1, ne ne se 29-8s-22w, fsg 875 ft.

GRANT COUNTY—Piney O&G Co.'s Kennedy 1, csw ¼ 10-29s-36w, br.

HASKELL COUNTY—Helmerich & Payne's Elliott 1, csw ¼ 30-29s-33w, br.

KINGMAN COUNTY—Lauck et al's Skilling 1, se se sw 33-27n-8w, dr 2101 ft.

LOGAN COUNTY—Alma Pet Co & McNelley's Watchorn 1, csw ne 13-15s-33w, dr 4607 ft.

McPHERSON COUNTY—Carey et al's Husband 1, se se nw 6-19s-13w, dr 3295 ft. Buss' Pulse 1, nw nw nw 12-32s-2e, br. Whan et al's Stromquist 1, sw se se 2-19s-3w, dr 1925 ft.

OSAGE COUNTY—Jim Edwards' Detrick 1, cnw se 21-14s-15e, td 800 ft, D&A.

PRATT COUNTY—Skelly et al's Gilchrist 1, cse ¼ 7-28s-11w, td 3605 ft, rust.

RENO COUNTY — Allison-Fitzwilliams et al's Dukelow 1, ne ne ne 11-22s-8w, dr 3917 ft. Shell Pet Corp.'s Reese 1, cw½ w½ sw 11-26s-9w, bailing mud. McPherson Drlg Co et al's Miller 1, ne ne nw 34-24s-5w, td 3501 ft, to acidize. Ghormley's Duwe & Dustin 1, cne nw 17-24s-7w, spd & sd. Douglas & Gray's Detter 1, ne se nw 28-22s-7w, cellar. Winkler-Koch et al's Brownlee 1, sw sw sw 31-24s-10w, ponfs.

RICE COUNTY — Douglas & Hutchinson O&G Co.'s Hammell 1, ne ne ne 16-19s-10w, 1000 gals acid 3350 ft, no test. Anderson-Kerr's Wernet 1, nw nw nw 24-20s-9w, co 3519 ft. Aylward et al's Haas 1, ne nw ne 4-19s-10w, dr 3250 ft. James Davis' Bernstarf 1, sw sw sw 19-19s-10w, dr 3080 ft. Continental Oil Co.'s Ferguson 1, se nw ne 8-18s-7w, td 3323 ft, pb 3230 ft, 2000 gals acid. Detrick et al's Conner 1, cne ne 28-19s-7w, fsg 2275 ft. Empire O&G Co.'s Schroeder 1, sw se se 7-18s-9w, sd 270 ft. Continental, Empire and Shell's Community Buckbee 1, se nw sw 13-18s-8w, lcn. Detrick et al's Monroe 1, cne ne 9-20s-7w, dr 890 ft. Hurd's Wright 1, ne ne ne 36-21s-7w, cellar abandoned.

ROOKS COUNTY—El Dorado Ref Co. et al's Marshall 1, cse se 8-7s-17w, dr 2185 ft. Lario et al's Fisher 1, ne ne ne 22-10s-18w, dr 3390 ft. Gillespie & Son's Low 1, ne ne nw 12-6s-18w, fsg 1560 ft.

RUSH COUNTY—Ramsey Pet Co. et al's Darkes 1, sw sw nw 5-17s-20w, dr 3728 ft. Boyle & Grossman's Wilson 1, ne ne ne 33-17s-19w, cellar abd.

RUSSELL COUNTY — Roth & Farrout's Shaffer 1, nw nw ne 31-13s-12w, pot 36 bbls, will retest. J. Brouk& R. D. Bailey's Galliart 1, nw nw se 34-15s-12w, pot 390 bbls oil, to retest. Nassau Oil Corp.'s Karst 1, nw sw ne 27-15s-14w, td 3318 ft, 1600 ft oih 5 hrs, no test. Coraleana's Berrick 1, ne nw ne 6-15s-13w, dr 2935 ft. Hartman & Blair et al's Claussen 1, se ne sw 34-12s-14w, dr 2850 ft. Johnson et al's Mermis 1, ne ne sw 29-13s-15w, dr 880 ft. Central Pet Co.'s Boxberger 1, nw nw nw 36-15s-15w, spd & sd.

SEDGWICK COUNTY — Dickey et al's Chase 1, se se se 11-27s-2e, td 3279 ft, pumped 35 bbls oil 9 hrs. Derby et al's Bartholomew 1, sw sw nw 8-27s-4w, td 4022 ft.

STAFFORD COUNTY—Atlantic & Phillips Pet. Co.'s Cornwell 1, cne sw 4-25s-13w, dr stem test 4072 to 4082 ft. Atlantic & Phillips et al's Community Brown 1, cnw ne 16-23s-13w, dr 1766 ft.

SUMNER COUNTY—Winkler-Koch et al's Belseley 1, sw sw nw 2-32s-2w, td 4201 ft. Wilson et al's Clark 1, csl nw 15-35s-1w, dr 2190 ft. Buss' Pulse 1, nw nw nw 12-32e-2e, br.

TREGO COUNTY—Hansa & Lauck's Lang 1, se se nw 1-14s-21w, ur 6-in csg 3829 ft. Vickers Pet Co et al's Secor 1, nw nw nw 25-15s-24w, ur 6-in csg 3920 ft. Central Commercial's Wagg 1, nw nw se 17-13s-21w, skid rig 40 ft east, ru.

WOODSON COUNTY—Saco Oil Co.'s Hassenpflug 1-A, sw nw ne 34-25s-14e, td 1509 ft, pumped 45 bbls oil, comp. Coulter, Davidson et al's Paske 1, nw nw se 25-25s-13e, dr 1340 ft.

## NORTH LOUISIANA

BOSSIER PARISH—Ark. La. Gas Co.'s R. O. Roy 3, 18-17n-11w, 7-in OD csg 4048 ft, wocs td 4235 ft, top anhydrite 3725 ft. Bossier O&G Co.'s Sherrell 3, se se 13-19n-12w, sd 2106 ft. Producers O&G Co.'s E. C. Edwards 1, se sw 27-18n-11w, sd 860 ft laying gas line. Producers O&G Co.'s Pettit 1, ne sw 17-17n-11w, dr 2640 ft lime. L. R. Skidmore's Davis 1, se se 12-18n-13w, owdd, td 2592 ft.

CADDO PARISH—W. F. Hyde's Thigpen-Herold 1, nw ne se 5-15n-15w, elev 281.8 ft, top Nacatosh 1143 ft, top chalk 1529 ft, sd 1740 ft for water. A. D. King's Roach 1, 4-14n-16w, sd 2712 ft chalk. Tystan, Inc's Jolly 1, 22-22n-16w, top red beds 2345 ft sd 2350 ft.

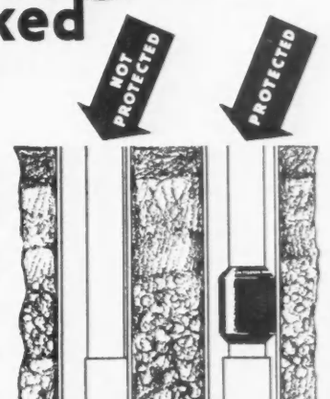
CALDWELL PARISH—Caldwell Drlg. Co.'s Gore 2, ne se 30-12n-3e, sd 768 ft. Critchett & Wood's Kyle 1, 18-11n-3e, pb, core 1699 ft after testing dry at 1698 ft in new hole, old td 2228 ft. G. W. Zeigen et al's La. Cent. Lbr. Co. 1, nw sw sw 25-13n-3e, sd 1190 ft.

CATAHOULA PARISH — McIntyre et al's Tensas Delta Lbr. Co. 1, sw nw se 18-10n-7e, cored 4 ft Cockfield sand sg 856-60 ft arr make ds test td 860 ft. Phillipi et al's La. Cent. Lbr. Co. 2, nw nw 41-9n-6e, dk.

CLAIBORNE PARISH—J. H. Lester's Zollie Green 1, nw ne nw 18-21n-6w, dr 2193 ft chalk. E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, elev 357.3 ft top red beds 3460 ft coring to bottom td 3722 ft. Ryan Oil Corp.'s Gladney 1, ne sw 27-20n-7w, arr set surf csg.

DE SOTO PARISH—Cardinal Oil Co.'s A. D Johns 1, se nw 20-14n-16w, arr dr plug & bail after setting short string 4½-in csg in 6⅝-in csg cemtd at 2583 ft td 2649 ft. Century O&D Co.'s D. Bailey 1, ne sw 25-11n-14w, dr

"No wonder that well leaked like a sieve!"

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**Casing that is worn, even if it shows no leak, will have years cut from the normal life.**

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**The pounding of the drill pipe may have broken the cement enough to cause an expensive water leak weeks or months after the well is on production.**

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2550 ft shale. Jal Drlg. Co.'s Scales A-1, se se 35-13n-12w, 8¼-in csg 2390 ft dr in with CT. Ed Saffold et al's Thigpen 1, sw ne 33-13n-13w, arr test 18 ft sand, td 1936 ft (Ozan). Snow Drlg. Co.'s Stell 1, 5-12n-16w, arr deepen 200 ft. M. L. Stephens et al's Alston 1, ne sw 11-11n-16w, arr swab td 2055 ft. C. T. Ruffin's Elmo P. Lee 2, nw sw 3-13n-14w, dr 2550 ft. The Hunter Co.'s S. J. Moats 1, ne sw 25-12n-15w, base chalk 1867 ft, top Blossom 2030 ft, dr 3103 ft.

JACKSON PARISH—Caldwell Land & Timber Co.'s Burroughs Est 1, ne nw 1-17n-1w, dk.

LINCOLN PARISH—Caldwell Land & Timber Co.'s Luther Hammonds 1, nw ne nw 30-18n-1w, dk. Ark. Nat. Gas Corp.'s (formerly Lide & Greer), Fowler 1, nw sw se elev 262 ft top Nacatosh 2275 ft, Annona chalk 2377-2650 ft, top first anhydrite 4589 ft main anhydrite 4629-5080 ft logged gas sand 5281-5303 ft cemtd 7-in csg 5270 ft td 5303 ft.

MADISON PARISH — Southern Land & Expl. Co.'s Deltic Inv. Co. 1, nw nw 1-17n-12e, arr deepen 2048 ft.

NATCHITOCHES PARISH—Roy Raines et al's Raines 1, sw sw 28-9n-10w, claim sg in Washita sand 4303 ft fsg hung drill stem near top hole, td 4303 ft. Union Pet. Co.'s DeBlieux 1, ne nw 83-10n-7w, sd 1870 ft.

OUACHITA PARISH — American Liberty Oil Co.'s Golson 1, nw nw 25-17n-1e, elev 160 ft top lower Cretaceous 3944 ft top first anhydrite 4464 ft main anhydrite 4662-4945 ft base last anhydrite 5041 ft claim O&G sand 5330-66 ft cemtd 5½-in csg 5200 ft td 5381 ft black shale.

RAPIDES PARISH — Amerada Pet. Co.'s Weil 1, 33-1s-2e, tested 4 thribbles oil & one sw 5704-52 ft, dr 6021 ft.

TENSAS PARISH—H. M. Jones' Hankins 1, 30-12n-10e, rur.

WEBSTER PARISH—Bennett et al's Fulbright 1, ne ne 1-18n-10w, sd 2310 ft. Red Hawk Oil Co.'s Mayfield 1, 9-23n-9w, rur.

WINN PARISH—P. E. Parsons et al's Tremont Lbr. Co. 1, nw sw 10-12n-2w, top Cane River 960 ft arr deepen 1240 ft gumbo & bldrs (Wilcox).

## SOUTH LOUISIANA

CALCASIEU PARISH—Fred Oil Co's Faist 1, sec 26-8s-10w, sd 4020 ft. Wheeler Oil Co.'s School Land 1, s of Iowa field, sec 16-9s-7w, reaming to bottom, 6900 ft.

CAMERON PARISH—Magnolia's Broussard 1, Willow Lake area, sec 13-12s-9w, coring shale 8836 ft.

EVANGELINE PARISH — Sparks-Mitchell & Jacobson's Vidrine 1, sec 47-3s-2e, dr shale 1645 ft.

EAST BATON ROUGE PARISH — Superior's Duplantier Community 1, University Blk, sec 65-7s-1w, perforated casing 6500 to 6505 ft.

IBERIA PARISH—Texas Co.'s Fausse Point 1, s flank of dome, sec 35-11s-8e, fsh 6400 ft. Jefferson Lake Oil Co.'s Lake Pigneur 274, Jefferson Lake, 12s-5e., fsh 8655 ft.

PLAQUEMINES PARISH—Wrather et al's Hero 1, near Oakville, sec 72-14s-24e, fsh 5343 ft.

ST. BERNARD PARISH — Emerald Pet. Co.'s Shell Beach Properties, Shell Beach prospect, sec 31-13s-15e, dr shale 5409 ft.

ST. MARY PARISH—F. F. Kramer's Robinson 1, sec 78-14s-14e, sd 100 ft.

ST. MARTIN PARISH—Texas Co.'s State Lake Mengouloi 1, 3 mi n of Bayou Chene, sec 10-9s-9e, dr water sand 4786 ft. Tide Water Oil Co.'s Smede 1, St. Martinsville prospect, sec 57-11s6e, no report.

ST. TAMMANY PARISH—Danciger Oil & Refining Co.'s E. F. Holdsworth 1, Slidell prospect, sec 26-9s-14e, sd 67 ft.

TERREBONNE PARISH—Dulac Oil Co.'s Harry Bourg 1, sec 10-20s-17e, dr shale 3990 ft.

## MICHIGAN

ALCONA COUNTY — V. R. Kirkham's Josephoson 1, 27n-8e, se se se-29, lcn.

ALLEGAN COUNTY—Heath Oil Co.'s Terpstra 1, 3n-14w-34, dr 2200 ft. Gerrit Vander Least's Berrens 1, 4n-14w-26, rig.

ARENAC COUNTY—Deep River Oil Co.'s Stocko 1, 19n-4e-27, sd 2700 ft.

BAY COUNTY—M. C. Fordyce's Suszko 1, 18n-3e-11, dr 2600 ft. McClanahan Oil Co.'s Dahike 1, 17n-4e-27, Dundee 2878 ft, dr 2935 ft.

CLARE COUNTY—Fred Siegle's Siegle 1, 17n-5w-26, rig T. K. Buzard's Neville 1, 17n-3w-19, sd 150 ft.

CLINTON COUNTY — John F. Martin's Scott 1, 8n-2w-22, sp.

GLADWIN COUNTY — United Producer's Nettleton 1, 17n-2e-24, csd 6 ft at 2135 ft.

GRATIOT COUNTY—St. Louis Pipe's Loganbach 1, 12n-2w-10, dr 3300 ft; North Mutual 1, 12n-4w-25, sd 3300 ft. Jackson and Myer's Garner 1, 9n-4w-31, dr 3050 ft. Charley Bell's Velie 1, 12n-1w-13, dr 650 ft.

HURON COUNTY—Wallace Markle's Opaka 1, 15n-11e-4, dr 1800 ft.

IONIA COUNTY—Gordon Oil Co.'s Muir Bank 1, 8n-5w-30, dr 1100 ft. J. V. Wicklund's Cutler 1, 8n-6w-10, Dundee 3082 ft, dr 3112 ft. Greer and Meal's Welch 1, 8n-6w-33, dr 200 ft. A. F. Holliday's Abbey 1, 13n-7w, nw ne nw-36, rig.

JACKSON COUNTY—Petroleum Dev's Mulvaney 1, 1s-1e-31, sw 2000 ft.

KENT COUNTY—National Mineral's Lewis 1, 10n-11w-5, dr 2300 ft. James Barton's Smith 1, 10n-10w-29, rig.

LENAWEE COUNTY — Socony-Vacuum's McCarbery 1, 5s-5e-36, dr 750 ft.

MECOSTA COUNTY—Strosnider Oil Co.'s Hand 1, 13n-9w-4, br. Goll-Graves-Mechling's Ruetz 1, 14n-7w, se ne se-17, lcn.

MIDLAND COUNTY — K. K. Leibrand's State 1, 15n-2e-32, dr 1500 ft.

MISSAUKE COUNTY—M. J. Ingold's Donley 1, 22n-8w-31, sp.

MONROE COUNTY—A. V. Oil Co.'s Vandercook 1, 6s-6e-30, dr 1000 ft.

MONTCALM COUNTY — Frank Asam's Pakes 1, 10n-6w-7, dr 1700 ft. Jetter & Lima's Long 1, 9n-6w-1, sg&o 2730 ft, dr 2900 ft. Rex Oil Co.'s Newland 1, 12n-8w-2, testing so 3063 ft.

## MISSISSIPPI

FRANKLIN COUNTY—Fred E. Courson et al's Homochitto Lbr. Co. 1, se sw 31-6n-2e, sd 2400 ft, curing titles.

GEORGE COUNTY—United Gas Pub. Serv. Co.'s Williams Unit 1, sw sw 6-1s-5w, dr 3615 ft.

LA FAYETTE COUNTY—W. L. Stewart et al's Russell 1, 9-10s-1w, dr black shale 2403 ft.

RANKIN COUNTY—Cleve Love et al's Mills 1, ne se sw 7-5n-2e, elev 272 ft, top chalk 2447 ft, tested est 2 mil ft gas considerable sw and so, td 2450 ft, pb to 2420 ft to test.

WARREN COUNTY—Harry W. Elliott et al's R. L. Parker 2, 14-14n-1e, elev 80 ft, arr deepen, td 1602 ft.

WASHINGTON COUNTY — Mid-Continent Developments' Lee 1, 33-15n-8w, co to deepen, td 2100 ft.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, elev 540 ft, 6⅝ in csg 2216 ft, bailed dry, arr deepen, td 2225 ft, Tuscaloosa.

## MONTANA

CARBON COUNTY — Bailey Round Butte Oil Co.'s 1, ne se 3-6w-22e, is dr 2193 ft.

FERGUS COUNTY—Judith Operating Co.'s Government 1, csw sw 26-22n-17e, dr 429 ft with 12½-in csg set at 400 ft. Emmons et al's 1, ne ne 6-20n-17e, is dr at 2193 ft.

GALLATIN COUNTY—Montana Gas & Petroleum Co.'s Tice 1, ne ne ne 28-1n-2w, dr 2503 ft.

ROSEBUD COUNTY — Birney Oil & Gas Co.'s 1, sw sw sw 6-6s-42e, dr at 527 ft with 10-in csg cemntd at 500 ft.

STILLWATER COUNTY—Continental Oil Co.'s Parker 1, se sw 25-5s-17e, dr 2831 ft.

## NEW MEXICO

BERNALILLO COUNTY — Norins Realty Co.'s Pajarito Grant 2, ne 22-9n-1e, lcn. Norins Realty Co.'s Gallegas Grant 1, cnw nw 19-11n-4e, rur.

CHAVES COUNTY—John Tannehill's Campbell 1, ne se 1-11s-25e, running 6⅝-in csg to 1064 ft. Worman Oil Trust Weldon-Horar 1, nw se 9-14s-25e, sdo at 1683 ft.

SANDOVAL COUNTY — Continental Oil Co.'s 1 Bar Cattle Co. 1, se 2-13n-4w, dr in red sandy shale at 4285 ft.

EDDY COUNTY—Geo. F. Getty's Andrew Dooley 7, swc nw 24-20s-29e, elev 3309 ft, td 6500 ft in black lime, set 3-in tub with packer 3350 ft, swabbed down to 6000 ft, no show and packer gave way, pull tub to dd.

LEA COUNTY—Amerada's M. J. Byrd 1, c nw nw 12-20s-36e, Monument area, lcn. Barnsdall's A. Cooper 1, c ne ne 12-20s-36e, Monument area, elev 3567 ft, top anhydrite 935 ft, dr 3210 ft. Gypsy's B. V. Culp 2, csw nw 19-19s-37e, Monument area, dr plugs, td 1360 ft; State-Graham-South 1, c se se 2-20s-36e, elev 3579 ft, blew out at 1847 ft, est 200,000,000 cu ft air, mudded off, cem 9⅝-in cas 2353 ft, sd to recem; Steve B. Taylor 1, c se ne 24-1-8s-38e, 2¾ mi ne Hobbs field, elev 3613 ft, top anhydrite 1950 ft, dr salt 3000 ft. Jeffers Oil Co.'s C. Britt-Conoco 1, c se nw 7-20s-37e, Monument area, elev 3554 ft, top anhydrite 970 ft, salt series 115-2270 ft, tested 200,000 ft gas on dst in lime 3072-3174 ft, dr 3230 ft. Harry Leonard et al's C. W. Justis 1, swc nw nw 20-25s-37e, elev 3067 ft, swabbing 7 bbls oil daily, td 3397 ft. Maljamar O&G Corp.'s Baish 5, c sw ne 21-17s-32e, Maljamar area, rig. N. G. Penrose & Rowan Drlg. Co.'s Will Cary-Humble 1, c nw sw 22-22s-37e, machine. Phillips-Pure's Woolworth 1, lse 2, c ne nw 33-24s-37e, 3½ mi e of Cooper field, elev 3265 ft, top brown lime 2772 ft, tested dry on dst 3600-3722 ft, r hole to dd; Woolworth 1, lse. 4, c se sw 8-25s-37e, dr 1310 ft. Repollo Oil Co.'s M. J. Byrd 1, nec nw ne

11-20s-36e, Monument area, cem 10-in cas 2360 ft. Republic Prod. Co.'s Selby-Maveety 1, c se sw 35-19s-36e, elev 3614 ft, dr 2510 ft. Shell's State 1-C, c ne ne 24-19s-36e, Monument area, rig. Skelly et al's B. F. Harrison 1, c nw sw 5-23s-37e, dr 965 ft. Skelly's State-Monument 1, c se se 15-19s-36e, sp. Sun's W. B. Maveety 3, c se ne 35-19s-36e, elev 3611 ft, top anhydrite 1040 ft, dr 3450 ft. Superior Oil Co. (Cal's) State 2-A, c nw ne 2-20s-36e, elev 3603 ft, dr 3275 ft. Texas' State 1-E, c sw sw 1-20s-36e, elev 3577 ft, td 1815 ft in salt, blew out and gauged 100,000,000 cu ft air, declined to small flow, dr 1995 ft; State 1-F, c ne se 24-19s-36e, dk; H. T. Mattern 1, c nw sw 20-19s-37e, dk. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, cem 12½-in cas 132 ft, dr 1020 ft.

## OKLAHOMA

ALFALFA COUNTY—Tex-O-Kan's Acre 1, csw ne 14-24n-11w, cored 6464 to 6472 ft.

ATOKA COUNTY—Vierson et al's Williams 1, ne sw nw 34-2s-10e, co 2236 ft. Garner et al's Garner 1, ne nw ne 27-1n-15e, sd 825 ft. Mid-Continent Pet Corp et al's Fulton 1, sw sw sw 19-1s-12e, sd 3005 ft. Phelps & Coats et al's Fidelity Life Ins 1, se sw nw 23-1s-12e, sd 47 ft. Price's Aetna Life Ins 1-A, nw sw ne 10-1n-13e, dr 1025 ft.

BEAVER COUNTY—Anderson-Kerr et al's School 1, csw se 36-5n-26 ECM, dr 1590 ft.

BECKHAM COUNTY — Martin's Hood 1, cne nw 7-8n-23w, dr 1030 ft.

BRYAN COUNTY—Trio Oil Co.'s Gilbert 1, sw ne sw 25-6s-7e, td 990 ft, D&A.

CADDO COUNTY—Denver P&R Co.'s Sah-Cam 1, cse se 33-10n-10w, dr 6626 ft. Turner et al's Sapin 1, ne ne sw 1-5n-11w, sd 3118 ft. Lee et al's Horton 1, ne ne ne 9-6n-13w, dr 750 ft. Lee et al's Stacey Ferrell 1, sw ne ne 3-6n-13w, td 2506 ft, D&A.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, dr ahead. Louis Sikes' Bryd 1, sw se sw 4-2s-2w, sd 20 ft.

CLEVELAND COUNTY — Hall-Briscoe, Inc's Fant 1, sw sw ne 27-10n-2w, td 6830 ft, to cement back to 5570 ft. Sinclair Prairie Oil Co et al's Lizzie Hasmann 1, sw se sw 21-10n-2w, td 7331 ft.

COAL COUNTY — Carter Oil Co et al's Thompson 1, csl ne nw 34-2n-9e, td 5985 ft.

COMANCHE COUNTY—Stevens' Green 1, se se sw 2-1n-13w, dr 1893 ft (error in depth last week). Imbodin et al's Smith 1, sw sw sw 12-2n-10w, sd 53 ft. McElreath & Suggett's Spencer 1, sw sw sw 21-3n-10w, material on ground. John Nicholas' Household 1, ne ne sw 8-2n-10w, spd.

GARFIELD COUNTY — Sunray Oil Co.'s Shanks 1, sw sw ne 10-20n-4w, td 3815 ft. Herndon Drlg Co et al's Whitaker 1, se se se 27-24n-3w, dr 3320 ft. McBride et al's Gage 1, se se ne 27-22n-3w, spd.

GARVIN COUNTY—Orbit Oil Co.'s Federal Bank Land 1-A, se sw sw 10-4n-3e, rig. Suggett & McElreath's Allie Camp 1, ne ne se 22-4n-1w, rur.

GRADY COUNTY—Sayre Oil Co.'s Anderson 1, ne ne se 36-4n-6w, dr 755 ft.

GRANT COUNTY — Stanolind's Crouse 1, cne sw 29-25n-8w, sd 6684 ft. Shell Pet Corp.'s Foster 1, nw nw se 30-27n-8w, dr 5373 ft. Wentz et al's Wirtz 1, se se nw 22-28n-4w, swedge pipe. Morton's Warren 1, se se nw 19-29n-4e, spd. Yingling et al's Allen 1, sw sw se 36-26n-4w, br.

HUGHES COUNTY—Texas Co.'s Keaton 1, nw nw sw 4-8n-10w, td 3915 ft, pb 3848 ft, 4,000,000 ft gas, comp. Sivils et al's Montgomery 1, nw sw nw 7-9n-8e, sd 930 ft.

JACKSON COUNTY—Associated Oil Co.'s Harrell 1-A, ne ne se 13-1s-21w, sd 1360 ft.

JEFFERSON COUNTY—Barrett's Mose 1, cn½ nw sw 9-6s-7w, dr 400 ft.

JOHNSTON COUNTY — Equitable O&G Co.'s Bellsey 1, ne ne sw 12-2s-4e, rig. Godfrey & Neff's Everts 2, se sw sw 20-4s-6e, td 253 ft, D&A.

KAY COUNTY—Robinson Drlg Co. et al's Hermes 1, sw sw nw 6-26n-4e, dr 3558 ft. Lewis Prod Co.'s Hollenback 1, se ne se 18-27n-2e, sd 3616 ft.

KIOWA COUNTY—Connelly's McCord 1, nw se ne 15-1n-17w, dr 635 ft.

LE FLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, wocs.

LINCOLN COUNTY—Garfield Buell et al's Seward 1, ne nw se 25-14n-3e, spd.

LOGAN COUNTY — Stanolind-Amerada & Eason's Gragg 1, sw sw ne 20-18n-4w, running Whipstock. Texas Co.'s Wood 1, sw sw ne 34-15n-5w, td 6433 ft, wocs.

LOVE COUNTY—Sinclair Prairie Oil Co.'s Stockton 1, se se sw 26-6s-2w, coring 5740 ft.

MARSHALL COUNTY — Smith's Chestnut 1, ne ne ne 23-8s-5e, sd 275 ft.

NOBLE COUNTY—Atlantic Oil Co. et al's Strom 1, ne ne se 8-20n-1w, td 5297 ft, D&A. Harry Chapple's Ragon 1, nw se nw 29-21n-1w, td 1805 ft, to shoot.

OKFUSKEE COUNTY—Sunray's Culla 1, ne sw ne 13-12n-8e, td 3985 ft, wocs. Stanolind-Amerada's Washington 1-A, se ne ne 12-13n-7e, lcn. Sherry et al's Washington 1, sw sw ne 21-13n-7e, rig.

OKLAHOMA COUNTY — Sinclair Prairie Oil Co.'s Corbett 1, ne nw ne 17-13n-3w, si. Sinclair & Slick-Urschel's Kratky 1, se se ne 19-13n-3w, dr 5655 ft.

OSAGE COUNTY—J. A. Freeburg et al's 1, ne ne se 1-25n-6e, co 2870 ft. Texas Co.'s Osage 1, sw sw se 22-24n-6e, dr 1775 ft.

PITTSBURG COUNTY — Vaughn et al's Chunn 1-B, ne se nw 29-4n-14e, rur.

PONTOTOC COUNTY — Continental's McCarthy 1, csw nw 12-1n-7e, fsg 4446 ft. Gypsy Oil Co.'s Emry 1, sw sw ne 15-2n-6e, dr 703 ft. Ada Pet Co.'s Simmon 1, cwl nw nw 8-3n-6e, dr 3781 ft.

SEMINOLE COUNTY — Deep Rock Oil Corp.'s Robert 1, sw nw nw 32-9n-8e, dr 1620 ft. Radial Oil Co.'s Huddleston 1, ne ne sw 19-5n-6e, td 2570 ft, pumped 100 bbls oil, completed.

STEPHENS COUNTY — Franklin & Duncan's Woolsey 1, nw nw se 10-3s-6w, sd 1050 ft. Prince Bros' Williams 1-A, sw sw se 19-2n-8w, dr 725 ft.

TILLMAN COUNTY — Gypsy Oil Co.'s Schenck 1, se nw se 31-1s-16w, dr 950 ft.

## EAST TEXAS

ANDERSON COUNTY—Tide Water & Texas Seaboard's N. N. Wills 21-A, Cayuga field Trinity test, elev 308 ft, cem 7 in csg 8750 ft, tested hot salt w at 8867 ft, pb fr Basal Trinity water sand at 9082 ft to 8734 ft, perforating cas; Shaw-Cern 2 (1216-ac), Daniel Parker sur, Long Lake area, elev 298 ft, Pecan chalk 3555-3618 ft, base Austin chalk 4854 ft, dr 5200 ft.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (40-ac), Jessie Milam sur, elev 272 ft, sd 1121 ft. Woodley & Bentley's J. D. Lump-


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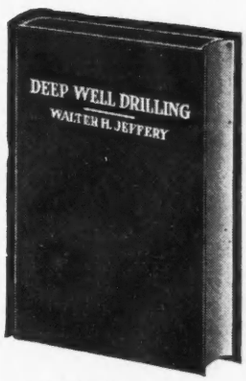


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kin 1 (245-ac), John McDermott sur, 1¼ mi sw of Dalby Springs, sp and sd.

CAMP COUNTY—E. J. Moran. G. E. & Ray Hubbard and E. R. Smith's J. M. Jordan 1, B. Carver sur, 1½ mi n of Newsome, Pecan chalk 2490-2725 ft, dr 3300 ft.

CASS COUNTY—American Liberty Oil Co.'s J. B. Rogers 1, C. M. Robinson sur, Rodessa area, elev 238 ft, rig. Stanley A. Thompson et al's Coy Dunbar 1, Wm. King sur, rig. United Production Corp.'s Lake Holt (Thurmond Unit) 1, John H. Coleman sur, sw Rodessa field, rig.

CHEROKEE COUNTY — Jacksonville O&G Corp.'s H. B. Henderson 1 (40-ac), J. Pineda sur, 5 mi ne Jacksonville, elev 409 ft, sd 2200 ft.

COLLIN COUNTY—Port Bolivar O&R Co.'s Clarkston-During 1-A, Wm. Creager sur, elev 722 ft, base Austin chalk 368 ft, ws 1460-80 ft, dr 2230 ft; J. Shirley 1, James Sorrell sur, elev 684 ft, base Austin chalk 350 ft, Washita lime 1762-63 ft, sd 1963 ft.

ELLIS COUNTY—Beasley O&G Co.'s Mrs. Erie Roller 1 (200-ac), Ruidoso Irrigation Co. sur, 1 mi s of Crisp, sp and sd.

FREESTONE COUNTY—J. A. Hoover et al's W. W. McFall 1 (65-ac), S. Garrison sur, A-749, 4 mi se Wortham, dr 150 ft.

GRAYSON COUNTY—Olson Drlg. Co. et al's Southwestern Life Insurance Co. 1 (160-ac), J. C. Jamison sur A-865, 3 mi n Pottsboro, elev 767 ft, pb from 2298 to 1750 ft acct crooked hole. Port Bolivar O&R Co.'s Creed Taylor 1, J. Fitzhugh sur, 3 mi se Gunter, rig.

HOUSTON COUNTY—Housh, Thompson & Benzi Oil Co.'s Houston Co. Timber Co. 1, I&GN Ry. sur No. 31, A-599, 2 mi n Kennard, rig. A. H. Smith et al's Smith Bros. 1, J. H. Cummings sur A-27, 2 mi sw Porter Springs, lcn.

HUNT COUNTY—J. F. Morrissey Co. Inc.'s P. B. Fry 1-A (146-ac), Calloway Davis sur, 7 mi se Ladonia, elev 561 ft, top Paluxy 3605 ft, top Red Beds 3806 ft, sd with junk in hole, td 4442 ft.

KAUFMAN COUNTY—C. C. Pearson et al (was Murray & Emerson's) G. W. Martin 1 (100-ac), W. F. C. Butler sur, elev 429 ft, top Austin chalk 1940 ft, dr 2075 ft.

LAMAR COUNTY—North Texas Synd. (E. T. Bradley, Tr.'s), Alice Wright (Reese) 1 (163.3-ac), Alfred Moore sur, 2 mi ne Caviness, dr red shale 1990 ft. L. W. Dennis et al's W. C. Clark 1, G. H. Hall sur, A-402, 3 mi ne Reno, lcn; Mrs. Effie Lawrence 1, T. B. Roundtree sur, 2 mi ne Blossom, dk. Texas Gulf Pet. Co.'s A. L. Darnell 1 (40-ac), H. L. Williams sur, 4 mi ne Paris, elev 544 ft, Austin chalk 816-864 ft, top Woodbine 948 ft, top Red Beds 1002 ft, dr red shale 2230 ft.

LEON COUNTY—Tide Water & Texas Seaboard's A. W. Johnson 1 (425.81-ac), Simon Sanchez sur No. 7, Long Lake area, elev 230 ft, Pecan chalk 3630-3830 ft, Austin chalk 4616-4919 ft, top Woodbine series 5221 ft, gas sand 5258-64 ft, td 5313 ft, pb and perforated cas 5253-65 and 5239-48 ft, complete est 75 million ft gas and spray oil; M. K. Carter 1-A (458.13-ac), Simon Sanchez sur No. 7, Long Lake area, rig.

LIMESTONE COUNTY—Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, Austin chalk 2350-2650 ft, top Woodbine 2890 ft, td 3121 ft, tested dry after using 1000 gals acid solution, dry and abd. David J. Crawford et al's Mary Ward 1 (28-ac), Pedro Varella sur, rig.

MORRIS COUNTY—J. N. Buchanan et al's P. M. Staggers 1, J. D. Nelson sur, elev 363 ft, sd 4327 ft. C. M. "Dad" Joiner et al's fee 1, Wm. Coffey sur, lcn. Steve J. Rotondi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw of Naples, sd 1740 ft. B. L. Watson et al's E. Hall 1 (177-ac), Levi Jordan sur, 5 mi ne Daingerfield, top sand 4175 ft, elev 360 ft, sd 4248 ft.

NAVARRO COUNTY—L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, Austin chalk 751-1060 ft, sd 1490 ft. E. M. Thomason & Co., Inc.'s T. P. Shivers 1 (69-ac), W. R. Bowen sur, 2 mi s Corsicana, dry and abd 1287 ft. Wiggins-Albritton & Wiggins' D. A. Donodo 1 (63½-ac), Highnote & Caudle sur, 2 mi sw Corsicana, elev 467 ft, td 1439 ft, dry and abd.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s C. A. Rose 1, Mary Smith sur, 3 mi n Clarksville, rig. Don F. Cleary et al's O. Mowery 1 (20-ac), J. Bowerman sur, 10 mi n Clarksville, dk. W. G. Clark & R. H. Chew's J. F. Brooks 1 (321-ac), Ben Gooch sur, ½ mi s Bagswell, elev 484 ft, dk. Garson & Seigel's W. T. Morris 1 (351-ac), Joseph Guest sur, 1 mi s Detroit, dk.

RUSK COUNTY—J.W. Shipman et al's Citizens Nat'l Bank 1-A (124-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, skid rig 400 ft east, rig. L. B. Prior & A. B. Edwards' W. R. Poston 1 (50-ac), Jacob Roth sur, elev 429 ft, Pecan chalk 2708-3180 ft, top Austin chalk 3610 ft, dry and abd 4004 ft.

UPSHUR COUNTY—Joe A. Papadakis et al's W. H. Allen 1 (37-ac), Lino Gonzales sur, elev 427 ft, show oil with sw in Woodbine sand 3776-82 ft, dry and abd.

VAN ZANDT COUNTY—J. H. "Bill" Gilliam et al's E. S. Marten 1 (416-ac), Jas. Hamilton sur, A-407, 3 mi ne Wills Point, lcn. American-Liberty Oil Co.-Pioneer Exploration Co.'s E. N. Sides-Spruce 1 (23-ac), J. Denman sur, 8 mi s of Canton, 5000-ft contract, elev 541 ft, top Taylor 2040 ft, Pecan chalk 2652-2813 ft, dr 2900 ft.

HARRISON COUNTY — Adams & Bird's Washburn Lbr. Co. 1, F. Jordan sur, dk and mir. Itex Oil Co.'s T. J. Taylor 1, W. H. Payne sur, elev 249 ft, old td 5853 ft, pb to 5735 ft, bailing.

PANOLA COUNTY — Steve Blazek's Robt. Johnson 1, J. Johnson sur, cemtd 6⅝ in csg 1960 ft, testing, td 1983 ft, claimed so. Modisett & Jolly's Lloyd Thompson 1, D. McDonald sur, rur. McAneny & Flinchbaugh's G. H. McCormick 1, Jas. P. McAdams sur, elev 381 ft, base Pecan Gap 2433 ft, claim 10.5 ft saturated sand, 7-in csg 2654 ft, wocs, td 2674 ft.

SHELBY COUNTY—J. A. Reynolds' O. H. Polley 1, William Whistler sur (formerly carried Christenberry sur), mim.

## SOUTH TEXAS

ATASCOSA COUNTY—R. C. Lee, Trustee's (Atascosa Trust), U. A. Bounch, 152-acre tract, 300 ft el and 160 ft sl of blk 10, J. T. Russell sur No. 1222, 3 miles n Poteet, mir.

BANDERA COUNTY—Palm Winn Oil Co.'s R. B. Watson 1, A. Curver sur No. 71, 2 mi n Medina City, lowering csg to 2035 ft. Plateau Oil Co.'s R. G. Garrison 1, sec 506 GC&SF sur, 8 mi sw Medina City, elev 1831 ft df, dr 4389 ft.

BASTROP COUNTY — Batts & Jarmon's Mrs. Mary Harris 1, J. Maximillian sur, N. Dale area, elev 432 ft, df, sd 2285 ft. Marts & Beavens' Scott 1, W. McLaughlin sur, dr 1245 ft. Joe Mills' W. W. Litton 2, A. Navarro sur, N. Cedar Creek area, dr 2610 ft. Port Isabel Oil & Gas Co.'s Story 1, lot 5, Mark Young Ranch, owned by John T. Story 205 acres, Reuben Gage sur, lost hole, to skid over and dr new hole.

BEE COUNTY—Mills Bennett's Mrs. Wm. Rapp 3, C. A. Dugat sur, ab 521, w outpost Dirks field, td 4776 ft, pb and sdtr 3000 ft. Hill, West & Kleiner's G. A. Ray 1, W. B. Blanchard sur, sw outpost West Tuleta field, sand 3931-38 ft, set 5 3/16 in csg 3931 ft. Worth Oil Co.'s Rutledge 3 (1-B), A. Hadley sur, Patent 364, 1/3 mi sw Rutledge pool, dry and abnd 3472 ft, sand 3389-90½ ft, show o&sw, sand 3469-72 ft, show sw; Rutledge 4, 660 ft sw No. 1, and 450 ft w of el of lease, A. Hadley sur, Patent 364, Rutledge area, lcn; R. J. Worthington et al's S. B. Chestnut 1, B. Q. Hadley sur, 2000 ft se Worth well, lcn.

BEXAR COUNTY—James B. Cunningham et al's D. F. Ridder 1, Baerrera sur, abs 50, 2 mi e McDonna, td 860 ft, pb 550 ft, reset perf liner, to test. Fay T. Chew et al's Bonkowski 1, 130-ac tr, sec 9, Jacinto Pena sur, 1½ mi e Adkins, lcn. Dorine Oil Co.'s S. Tudyk 2, blk 4, F. Cardenas sur, 18 mi e San Antonio, td 759 ft, pb 610 ft, set csg 575 ft, fsh, may abnd. Joe Deupree's R. S. Coffey 1-A, F. Rodriquez sur, 7 mi s San Antonio, dr 680 ft. C. J. LeCompte's A. Herbst 1, M. Leal sur, 4 mi s San Antonio, sd 377 ft. McPhee & Briggs' Florence Lamb 1, M. de Luna sur, No. 4, 22 mi s San Antonio, sd 2452 ft. Nick Marosis' Joe Florey Est. 1, Stephen Jett sur, at Von Ormy townsite, dry and abnd 770 ft; Joe Florey Est. 2, 150 ft nl and el of 21.1-ac tr, S. Jett sur, abt 600 ft e No. 1, mir. Mid-Tex Prod. Co.'s Walker 1, S. W. Dobie sur, No. 79, 10 mi n San Antonio, sd 2131 ft, slate and schist. Carrol G. Raborn's Claud McCauley 1, Wm. Harris sur No. 52, 4 mi s San Antonio, sd 965 ft. H. B. Starkey's (was Joseph H. Parker) M. McCloskey 1, F. A. Desaque sur, 5 mi nw Somerset, prep to set csg above, sand and sandy shale 722-79 ft, F. M. Shaver's A. W. Bitter 1, J. M. Baerrera sur, near McDonna, dr 750 ft, showing little oil. Fred Thorman's Sahm 1, Peter N. Hays sur No. 3, 2 mi s of Martinez, dr 200 ft.

BLANCO COUNTY—R. T. Rowe & W. E. Nixon's Polk Morresey 2, T. H. Webb sur No. 11, 2½ mi e Blanco City, dr 220 ft.

BROOKS COUNTY—United Prod. Co.'s K. J. Hocker 1, Palo Blanco de Maguelles gr, Palo Blanco area, dd 5351 ft. Winfield & Moser's W. Singer 1, se¼ sec 312, nw part of county, td 640 ft, show oil and sulphur w, pull csg and dd.

CALDWELL COUNTY — Ballard & Whitting's A. G. Bridges 1, S. Seal sur, sd 2204 ft. S. S. Cargill's Damerau 3, Dillard Cooper sur, Branyon area, sd 860 ft. C. & C. Fuel Oil Co.'s (Clark & Crouch) Jolly 1, Cornelius Crenshaw sur, Larremore area, td 1296 ft, top Edwards lime 1287 ft, 6⅝ in csg, set 972 ft, wocs. Detroit-Texas Dev. Co.'s W. P. Dunlap 3, S. F. Sanders sur, Dunlap area, sd 2322 ft. J. J. Elam et al's Francis-Brown-Cochran 1, W. F. Young sur, 5 mi e Luling, dk. R. Y. Walker's Walker Bros. 2, S. Seal sur, set 7 in csg 2030 ft, prep to dr ahead.

CALHOUN COUNTY—Continental Oil Co.'s Am. Nat'l Realty Co (Moody) 2, sec 6, blk C. P. Garcia sur, 9 mi se Seadrift, wocs 7384 ft. Crown Central Pet. Corp.'s Wilson 1, A. Esparza sur, Port Lavaca area, td 6315 ft, pb 3300 ft and sdtr. Halliburton Oil Prod. Co.'s D. Burton 4, M. Sanchez sur, Port Lavaca area, td 7460 ft, dr 4600 ft in sdtr hole. Matagorda Oil Corp.'s Brundrett Est. 1, lot No. 294, Brundrett Estate 1, J. Power and J. W. Hewitson League 2, Matagorda Island, set 16 in csg 176 ft.

CAMERON COUNTY — J. F. Anderson's Turfitt 1, blk 397, San Benito sub, Espiritu Santos gr, 3 mi ne Rio Hondo, sd 5300 ft. W. T. Daniels & King-Woods Oil Co.'s Port Isabel Co. 1, center lot 17, shares 29, 30 and 31, Buena Vista gr, 6 mi n Bayview, sp and sd, wor.

DE WITT COUNTY—R. Bourke's Steinman 1, Uriah Blue sur, 6 mi s Yoakum, sd 4408 ft, show little gas.

DIMMIT COUNTY — Diamond Half Oil Co.'s A. Eardley Est. 1, R. G. Morgandale sur No. 6, ab 1322, 5½ mi nw Carrizo Springs, 1, dr 2900 ft, hard shale.

DUVAL COUNTY—Alpha Oil Co.'s M. C. Hubbard 1, sec 69, s of Loma Novia field, dry and abnd 2900 ft. The California Co.'s Gruy Est. 1, sec 157, in Kohler area, dr below sur csg. Continental Oil Co.'s Clara D. Sevier 6-A, sec 447, Driscoll field, td 3435 ft, sand 3406-23 ft, run csg to td, made small well through perforations, trying to reset packer. J. H. Chandler's Rita De Pena 1, sh 4, Mesquite gr, elev 665 ft df, dr 3450 ft. Highland Oil Co.'s Wm. Hubbard 2-B, 330 ft nl and wl of se¼ of sec 75, Loma Novia field, td 2580 ft, top sand 2572 ft, set csg, wocs. Howeth & Swiger et al's Rogers Est. 1, sec 15, 9 mi nw of San Diego, lcn. P. K. Kelly's Tinney Est. 1, sec 8, Piedras Pintas area, sand 800-04 ft, 5 in csg 795 ft, td 804 ft, woc. Chas. Kleiner et al's D. Ruiz 1, sec 125, nw Harvey & Henderson well, tested sw, to be abnd. Magnolia Pet. Co.'s Emil Labbe 1, sec 2, Labbe district, dr 103 ft; Duval-Sentz 1, sec 165, 1¼ mi nw Charamousca pool, ru. Santa Clara Oil Co.'s R. C. Corbett 1, sec 92, GH&H RR sur, ne portion county, dr 4300 ft. Sun Oil Co.'s Wm. Hubbard 1, se¼ sec 84, Loma Novia area, dr 2101 ft, sh. Stanolind


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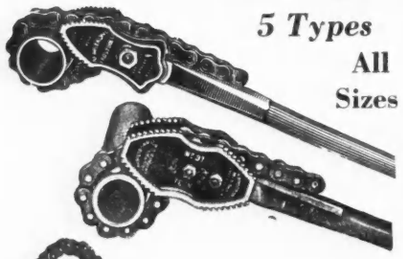

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O&G Co.'s Ira G. Yates 1, sec 416, Labbe area, sd 2948 ft, pb and perforate 2453-63 ft, now sd. The Texas Co. & Ohio Fuel Oil Co.'s Duval County Ranch Co. 1, sec 96, Piedra Lumbre, ru. Texla Oil Corp.'s Nueces Land & Live Stock Co. 1, sw ne sec 101, 5 mi nw Eagle Hill, sp.

EDWARD COUNTY — Paul Teas' B. J. Stewart 1, se¼ sec 2, GC&SF sur, lcn for 6000 ft test.

FRIO COUNTY—W. D. Bacon et al's J. E. Burns 1, T. H. Clifton sur, sw Bigfoot, sd 1750 ft. Midland Oil Co.'s Halff & Oppenheimer 1, se¼, sec 11, John Gibson sur, nw Pearsall, dr 2750 ft.

GOLIAD COUNTY — Brown & Wheeler's Kauffman 1-C, blk 14, G. Southerland sur, Hords Creek, sand 4530-46 ft, shale 4546-58 ft, oil sand 4558-66 ft, dk collapsed while running csg, rebldg dk and fsh for csg. Dirks Bros.' G. A. Ray 1, 1200 ft el, 1400 ft sl of B&B sur, ab 421, 4 mi ne of Pettus, dr 2875 ft. Keystone Royalties Co.'s C. B. Wood 2, John Shearn sur, 3 mi e Berclair, topped sand 5975 ft, trying to core deeper, attempting to blow out. Sun Oil Co.'s J. R. Kaufman 1, T. T. Trevino sur, 1 mi ne Hords Creek field, lcn.

GONZALES COUNTY—Forrester Oil Co.'s H. B. Steen 1, N. M. Bane sur, s part of county, sd 150 ft. Inter-Allied Pet. Corp.'s C. M. Wells 1, tr 3, sub 1, Jose de la Baume sur, sd 3267 ft, hard Taylor. Resource Oil Co.'s Otto Lanbeck 1, J. M. Salinas sur, 3 mi w Gonzales, sp and sd.

GUADALUPE COUNTY—J. E. Clark's J. F. Larison 1, G. Dewitt sur, ab 16, 330 ft sw Clark's Lay 1, coring 2585 ft, top chalk approximately 2440 ft. F. N. Gallagher's W. B. Lay 1, J. K. Davis sur, lcn. Jim Harper et al's J. Z. Fulshear 3, Robt. Smith sur, 2 mi nw Prairie Lea, sd 1870 ft. Henadena Oil Co.'s (Sterling & Wilson) R. P. Lowman 2, G. Allen sur, Staples, mim. Kniffin & Gallagher's Stagal-Lay 1, Davis & DeWitt sur, sd for csg 2360 ft, top Austin chalk 2357 ft. Hopkins Bros. et al's F. C. Gabriel 2, 65-ac tr, Geo. Allen sur, Staples, lcn. R. C. Robbins' Mrs. J. W. Manford 1, James Hodges sur No. 374, 1250 ft e Manford pool, sp. Suttle et al's Baenzinger 1, A. O. Manchola sur, sd 2155 ft.

HIDALGO COUNTY—D. M. C. Oil Co.'s Daskem 1, blk 34, por 45, 4½ mi ne Samfordyce field, sd 4114 ft. Gulf States Oil Co.'s Delta Orchards 1, lot 2, blk 73, Las Mestinas gr, 1 mi s Mestinas field discovery well, sp. Lensgraf-Walden-Carmen's Brock & Showers 1, lot 4, blk 12, por 80, Juris of Reynosa, 12 mi nw Mission, sp. S. J. Sloan et al's Brock & Showers 1, lot 9, blk 16, por 80, Juris of Reynosa, w of Mission, td 6003 ft, ran electric formation test, set csg at 4700 ft, gas sand 4630-46 ft, oil sand 4646-69 ft, will perforate csg. Stevens & Mundy's F. B. Guerra 1, tr 12, por 41, 2000 ft n Samfordyce field, elev 188 ft, df, td 3030 ft, set csg 2990 ft, washing with oil. Union Sulphur Co.'s ARGL&I Co. 5, lot 2082, N. Capisallo district, Llano Grande gt, td 7529 ft, set csg on bottom, perf 7497-7501 ft, test little oil, perforate above; ARGL&I 6, tr 2358, blk 49, N. Capisallo district, 4500 ft ne of Mercedes field, dr 2850 ft.

JACKSON COUNTY — Shell Pet. Corp.'s Mauritz Bros. 1-A, 692 ft nl, 466 ft el of tr 19, A. Kountze sur, ab 237, nw of Mauritz field, mir. Smith & McDonald's Mauritz Bros. 1, 466 ft sl, 394 ft sl 80-ac lease, Cummings sur No. 17 (Pure Oil Co lease) Maurtiz district, dr 1750 ft.

JIM HOGG COUNTY—Macon Pet. Co.'s Y. Gomez 1, sec 1005, dry and abnd 3010 ft. Miller et al's Yeager 1, blk 6, sec 20, dry and abnd 3532 ft. J. E. Walsh's W. D. Wade 1, 660 ft nwl, 400 ft nel of lot 3, blk 6, W. H. Bode sub, Sandia district, dk.

KARNES COUNTY — Mart Pet. Corp.'s Cochran 1, McConnell League, sp and sd. Dirks Bros., Belknap 1, 150 ft nel, 1609 ft sel of lease, Chas. Haynes sur, 4 mi n of N. Pettus field, dr 3190 ft.

KENDALL COUNTY—J. E. Freeman's Gerfer's 1, Mark Hodgson sur, No. 796, sd 102 ft. Southwestern Dev. Synd., Ltd.'s Willie Werner 1, Torrey sur No. 781, Sisterdale area, dr 883 ft.

KERR COUNTY—Auld & Evans' Heffner 1, sec 13, BS&F sur, ru and sd. Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, Martinez sur, sec 1594, ½ mi se original Love Ranch test, sd 5625 ft.

KIMBLE COUNTY — Forest Dev. Co.'s Stapp 1, sec 682, ru and sd. Wilcox O&G Co.'s Patterson 1, sec 1, D&P Ry. sur, ab 915, dr 4010 ft, last report.

KLEBERG COUNTY—Harry Clark's W. S. Rogers 1, lot 1, blk 36, Kleberg sub, sd 750 ft. R. G. Flato, Trustee 1, blk 14, sec 40, KT&I sur, Kingsville area, lcn. Parr & Ponder's Sam Michalk et al 1, lot 5, blk 37, KT&I sur, re-dr 1983 ft.

LA SALLE COUNTY—O. N. Beer & C. L. Witherspoon's La Salle Co. 1, sec 19, near Fowlerton, wor.

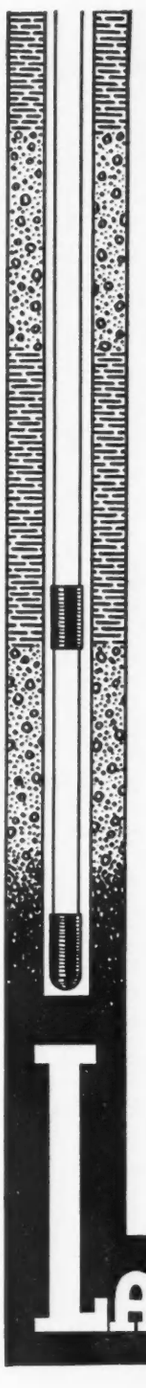
LEE COUNTY—Douglas Spivey et al's First Nat'l Bank (T. S. Henderson) 1, Wm. L. Mock sur, lcn.

LIVE OAK COUNTY—C. A. Beaucamp's S. A. Joint Stock & Land Bank 1, 150 ft nl and el of lot 10, J. Turner sur, lcn. Benco Oil Co.'s Eliz Mahoney 1, Mark Killely sur, 3 mi w Three Rivers, sd 78 ft. Earl Callaway et al's W. R. Lyne 1, sec 74, M. M. Lyne sur, ab 763, coring 2165 ft; Moozegemba 1, lot 122, Geo. Est sub, blk A, ab 113, S. L. Williams sur, lcn. Conway & Buescher's Sanger 1, GC&SF sur No. 383, ab 636, 15 mi sw George West. dr 2160 ft. Lion Oil & Refining Co.'s Dick Dobie 1, GH&H sur No. 23, s edge of McNeill field, dr 5000 ft, sand 4465 ft, dr. Luray Oil Co.'s Little 1, 330 ft nl and wl of 40-ac lease, M. M. Shipp sur, ne offset discovery well, McNeill (north) field, ru. Slick-Urschel Corp.'s Watson & Shipp 1, P. Salinas sur, Fort Merril area, lcn. Smith & Story's Dinero Townsite 2-A, Jane Curry sur, North Lucas area, lcn. J. O. Whittington's Little 3, M. M. Shipp sur, 660 ft sw discovery well, McNeill (north) area, coring 5150 ft.

MAVERICK COUNTY—Thompson & Streeter's Joseph Wippf 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—Aransas Oil Co.'s M. H. Reed 1, J. A. Spicer sur No. 70, 12 mi sw Tilden, sd 1681 ft. Darby Pet. Corp.'s E. R. Hagist 1-B, 6 mi w Loma Alta field, coring 1725 ft. L. O. Gleason's Fitzpatrick 1, J. A. Loving sur, No. 52, dr 1810 ft. Marzo Oil Co.'s E. R. Hagist 1-B, sec 6, southern part of county, sp and set sur csg. L. D. Ormsby's Jacob 3, 150 ft sel, 1000 ft nel Sparks sur No. 18, mir. C. W. Points et al's Fahler 1, Geo. Pittuck sur, 5 mi w Calliham, temp abnd 1004 ft. Stephenson & Wuest's Fisher 1, R. O. O'Boyle sur, nw of Calliham, set csg 502 ft, no later rept. Texas Inland Oil Co.'s H. L. Lark 2-A, 150 ft out of n corner of M. O'Boyle sur, south of Jacobs field, ru. Wilkerson & Lightfoot's H. L. Lark 6, blk 113, Lark sub, Scrugham sur, nw Calliham field, td 1050 ft, went to sw, reworking.

MEDINA COUNTY—Frank A. Brown's A. E. Brueks 1, John Ward sur, dr 450 ft. Caroco Oil Co.'s (Callahan & Roberts) H. Taylor 2, A. Brushet sur No. 135, 5 mi sw Hondo, sd 380 ft. E. J. Deupree's L. J. Bruecks 1, Henry Castro

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sur No. 248, dr 748 ft. Ed Falvey et al's McMenemy 1, sur No. 33½ G. Petty sur, 4 mi se Devine, sp. Gates & Hill's Odom 3, H. Castro sur No. 174, 5 mi sw Hondo, ru. Letro Oil Corp.'s F. B. Forest 1, Sec 69, 1½ mi ne Ina field, 1½ mi Adams field, dr 465 ft. Scoggins and Sanders' L. W. Burell 1, M. E. Gage sur, elev 867 ft, dr 1930 ft.

NUECES COUNTY — Bluff Pet Corp.'s Bluntzer 1, sh 6, Bluntz Lands, Casa Blanco, 10 mi n Banquette, dr 550 ft. J. K. Culton's H. B. Baldwin et al 1, blk 20, Russell Farm Blocks, 1½ mi w Corpus Christi, dr 1500 ft. Gilcrease Oil Co.'s W. W. Sanders 1, BS&F sur, No. 165, Ab 55, dr 395 ft. La Jita Corp.'s Richard King Est 1, se¼ sec 22 Richard Ranch sub, ne discovery well, King field, td 6008 ft set 7-in csg 5220 ft, perf csg 5140-55 ft, show little gas. Magnolia Pet Co.'s Bobby Baldwin 2, BS&F sur No. 165, 3000 ft sw discovery, dr 6511 ft. Richardson & Thomas' Page Bros 1, Geo. Franks sub, w Saxet field, dr 5740 ft. Santa Clara Oil Co.'s Clara Driscoll Sevier 1, Wm. Gamble sur, Ab 6, 1¾ mi ne Driscoll, lcn. Shell Pet Corp.'s Ed F. Flato 1, Trs 9 & 10, H. H. Sheppard Farm Lots, coring 6670 ft.

REAL COUNTY—H. J. Heartwell et al's L. J. Haby 2, AB&M sur No. 175, sd 3225 ft.

SAN PATRICIO COUNTY — Argo Royalty Co & Willie Storm's Nancy Hobbs 1, Delgado Gr, 1 mi s Mathis, sd 3520 ft. Benedum & Trees' E. H. Welder 1, sec 34, Welder sub, 2½ mi w of Plymouth field, set sur csg, wocs. Conroe Dr Co.'s E. H. Welder 1-G, sec 47, s end of Plymouth field, dr 5400 ft. Magnolia Pet. Co.'s Corpus Christi Bank & Trust Co. 3, H. H. Hunter sur, s of Plymouth field, set sur csg, dr ahead. Pylmouth Oil Co.'s E. H. Welder 17-C, on n line sec 49, Welder sub, north outpost well Plymouth field, td 5518 ft, comp, no gauge. Sun Oil Co.'s J. M. Hunt 1 (blks 5 & 6) sec 34, Taft Farm Tracts sub, se Plymouth field, dr 5150 ft.

STARR COUNTY—Ash & Tackett's Margo 1, blk 4, sh 3-B por 70, sd 200 ft. Barnsdall Oil Co. & Phillips Pet Corp.'s Yturri Land & Cattle Co. 2, por 100, 660 ft nw of Samfordyce production set 200 ft sur csg, re-dr. John H. Clopton's Roos & Bennet et al's 2, por 92, sd 2504 ft for orders; Kelsey-Bass 2, por 87, 3½ mi n of State Highway 4, sec 10, ru. Evans & James' Ferry 1, por 77, 2 mi w Rio Grande City, dr 1120 ft. McCurry & Yates' Starr County Cattle Co. 1, blk 58, J&L sub, por 89, Barbacoas area, lcn. A. Nix et al's Starr County Cattle Co. 1, blk 58, J. L. sub, por 89, Barbacoas area, td 2817 ft, ran electric formation tester, pb and sdtr 1853 ft, set casing 2310 ft, sand 2312-20 ft, wocs. Pedernal Oil Co.'s Sarah Welch 2, lot 3, Welch sub, El Pedernal Gr, lcn abnd. H. J. Porter et al's Garcia Land & Cattle Co. 1-B, blk 2, por 100, w of Samfordyce field, dr 2550 ft.

TRAVIS COUNTY — G. A. Arts' Rolff 1, Thos Hancock sur No. 20, ¼ mi n Sweden sd 860 ft. W. O. Daffey's C. C. Nelle 1, G. Gates sur, dr 175 ft. C. B. Collard's J. Blomberg 1, Windburn sur, sd dry & abnd 885. J. E. Smith 2, 150 ft nel, 300 ft nwl, 113-ac tr, L. Kimbro sur, dr 680 ft.

VICTORIA COUNTY—Barnsdall Oil Company & Felmont Oil Corp.'s J. M. Pickering 1, S.A.&M.G. sur, Ab 305, Placedo area, completing 4771-81 ft; W. R. Smith 1, A. Murray sur, s of Placedo field, dr 2000 ft. Heep Oil Corp.'s J. J. Welder 1, 300 ft swl, 750 ft sel of Phillip Graves sur, near Mursery, mir. J. McDowell's Kirasek 1, center blk 45, Placedo townsite, sp. E. L. Smith Oil Co. & Gulf Prod. Co.'s S. E. Wright 1, J. M. Bronson sur No. 8, Placedo area, comp 4781 ft, no gauge; Boehm 1, Placedo townsite, dr 500 ft. Sun Oil Co.'s J. J. Marek 2, SA&MG Ry sur No. 9, Placedo area, dr 3000 ft. Westgate Oil Co.'s Henderson & Pickering 1, Placedo area, ru.

WEBB COUNTY—D. E. C. Oil Co.'s Slator Ranch 1, blk 29, Mission Oil Company sub, Slator Ranch, J. S. Borrego Gr, sd 375 ft. French Oil Corp.'s Juan Guerra 1, blk 14, se sec 334, 3 mi ne Oilton, sp. O. W. Killam's Ortiz Ranch 1, por 17, 6 mi nw Laredo dr 150 ft. C. H. Lewis et al's Lopez 1, sur 110, 2 mi s of Lopez field, cored sand 2251-60 ft, dst 2250-60 ft show 1125 ft plo 10 min, set 7-in csg 2246 ft, wocs. Magnolia Pet Co.'s Volpe Bros 1, sec 485, n of Carolina-Texas field, dr 2336 ft; Garcia-Arriba 1, 330 ft sl and el of blk 8, Henry James sub, Albercas de Arriba sur, 5½ mi e of Aviator field, lcn. Rhea Nixon & R. W. Talbot's A. S. Billings 1, 300 ft nl and wl se se sec 113, 1 mi sw Lopez field, clear lcn. S.S.&B. Oil Co.'s Lone Star Construction Co. 9, 330 ft sel, 770 ft nel of por 12, 12 mi nw of Laredo, 150 ft, dr. R. E. Misner's Garcia 1, se¼, sec 457, testing 2175 ft. South Texas Oil Co.'s Laurel 2, blk 1, sur No. 269, Laurel area, ru. W. H. Vernor Tr's Jefferies Ranch 1, blk 13, sec 1453, 30 mi sw Laredo, sd 40 ft. A. H. Wray's Geo Steumpke 1, sh 1, Brewster Pasture, Joaquin Galan Grant, coring 1454 ft.

WILLIAMSON COUNTY—Glass Bros' A. Albert 1, P. Coursey sur, sd 785 ft. Hays Gee's Coupland State Bank 1, Lancey sur, w of Coupland, dr 685 ft. Rule et al's Bochmeyer (Rummell) R. Cartwright's sur, sd 800 ft. G. A. Ripley's A. Muery 1, J. P. Wyeke sur, near Coupland lcn.

ZAPATA COUNTY—H. F. Crow's B. Uribe 1, blk 35, sub of sh 11, por 4 & 5, San Ignacio sub, J. V. Borrego Gr, dk; Yzaguirre 1, sh 17, por 15, Lopena area, sd 415 ft, may set csg. Humble O&R Co.'s E. Dominguez 1, por 31, dry & abnd 5973 ft. J. J. O'Hern et al's S. Vela 1, blk 3, por 27, 7 mi ne of Charco Redondo field, dr 750 ft. Joe Palmer's Emma Markrud 1, blk 22, sec 616 sd 1270 ft. SR&C Oil Corp.'s Trevino 15-A, blk 8, sec 66, Escobas field, deep test, sd 2580 ft.

## TEXAS GULF COAST

BRAZORIA COUNTY — Gulf Production Co.'s Smith 1, J. W. Hall sur, ru. R. R. Osburn's J. L. Jones 1, 4 mi w of West Columbia, J. Thompson sur, sd 20 ft.

CHAMBERS COUNTY—Woodley Pet. Co.'s A. G. Blanke 1, 1¾ mi ne of Mason's R. M. White 1, H&TC sur, sec 41, abd 7452 ft. Johnson & Anderson's White 1, J. McGehey sur, spudded. Salt Dome Oil Co.'s Lawrence 1, Cotton Lake, J. Grant sur, dr shale 4410 ft.

COLORADO COUNTY—Clyde Creighton et al's H. Witte 1, s of Bernard, H. Witte sur, abd 5010 ft.

FT. BEND COUNTY — Thompson Drlg. Co.'s Brown 1, Pilant Lake, Geo. Menefee sur, Texas Gulf Producing Co.'s Winston 1, S. Isaacs sur, dr shale 1285 ft.

GALVESTON COUNTY—Sun's Hughes 1, Green Lake prospect, W. C. M. Baker sur, dk.

HARRIS COUNTY—E. E. Young's Griffith 2, w of Humble, A. R. Bodeman sur, dr shale 4135 ft. Cockburn Oil Corp.'s Houston Ship Channel 1, Battle Ground prospect, A. McCormick sur, dr plug 782 ft.

JEFFERSON COUNTY—Sun Oil Co.'s Hebert & Broussard 1, s of Lovall Lake, Labelle area, B. Backmon sur, dr plug 8210 ft. Jack Frazier's Oswald 1, Cheek area, M. Peveto sur, dr shale 6360 ft. Humble's White 1, Jefferson Island prospect, T&NO sur, sec 370, reaming 2796 ft. Tatum & Pendigras 1, n of Port Arthur Land Subdivision, dr shale 250 ft.

MATAGORDA COUNTY — Helmerick & Payne's Hawkins 1, Sheppards Mott, D. A. McCarthy sur, dr shale 5994 ft. H. M. Smith Corp.'s Wadsworth Estate 1, S. R. Fisher sur, dr shale 8848 ft. Sterling Oil & Refining Co.'s Baer 1, sw of Sargeant, S. Hoit sur, sd 1830 ft.

ORANGE COUNTY—Blue Line Oil Co.'s Peet 1, 8 mi n of Orange, M. Ely sur, dr shale 1850 ft.

SAN JACINTO COUNTY—Darby Jones J. R. Bennett 1-A, David Beer sur, pb 3300 ft.

WHARTON COUNTY—Pure Oil Co.'s E. Page 1, Blue Basin prospect, J. Pirie sur, dr shale 5654 ft. Sterling Oil & Refining Co.'s F. Janek 1, East Bernard prospect, J. Scott sur, woc 8667 ft. Texas Co.'s Pierce Estate C-1, Five corners propsect, Jno. Caldwell sur, dr shale 5468 ft.

## WYOMING

ALBANY COUNTY—Ohio Oil Co.'s W. B. Emery 1, cse ne 30-15n-75w, coring Morrison sand at 1377 ft, which looks wet.

BIG HORN COUNTY—J. W. Bales' Parker 1, sw sw 23-49n-89w, dr at 543 ft. J. H. Shaffer's 1, sw sw sw 8-49n-91w, dr at 1268 ft.

CARBON COUNTY—General Pet. Corp. of California's Whitford 1, sw se ne 24-20n-84w, dr at 5401 ft will run 8-in csg to 5200 ft. Shirley-Wyoming Oil Co.'s Quealy 1, nw nw ne 21-26n-80w, is dr at 500 ft.

CONVERSE COUNTY—Chadron-Osage Oil Co.'s State 1, cne 16-32n-69w, dr 1400 ft.

NIOBRARA COUNTY—Riggs Oil Co.'s A. A. Spaugh 1, nw nw nw 4-33n-65w, abd 1900 ft. Shogren and Hultgren's Olinger 1-A, cne ne se 13-6n-63w, dr 1653 ft.

PARK COUNTY—Geo. T. Beck's 1, nw se nw 27-53n-101w, dr 1436 ft.

SHERIDAN COUNTY—Sheridan Syndicate's Allison 1-A, sw sw se 15-55n-85w, dr 2788 ft.

WASHAKIE COUNTY — Wyoming Oil & Refining Co.'s Frison 1, nw sw nw 14-48n-91w, dr 1718 ft.

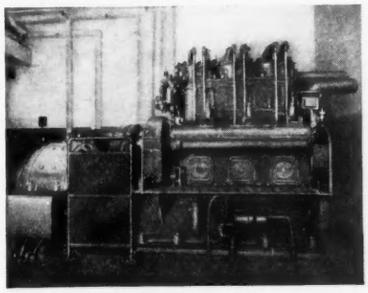

**FOR SALE—Owner leaving city and must sacrifice beautiful home in exclusive section. Large living room, sun room, library, dining room, kitchen, five bed-rooms, three baths, two sleeping porches. Hollow tile and steel construction. Lot 180x150. Shown by appointment only. P-8436 or H-5275. 517 Commercial Bank Bldg., Houston, Texas.**

NORMAN RICKER, Ph.D.
Consulting Mathematical Physicist
MATHEMATICAL ANALYSES OF PROBLEMS
in
ENGINEERING AND APPLIED GEOPHYSICS
2115 Wentworth Ave. Phone Hadley 8510
HOUSTON, TEXAS

# NEW PRODUCTS FOR THE FIELD
## Machinery • Tools • Catalogs • Books

### DIESEL ENGINES
**Chicago Pneumatic Tool Company**

Chicago Pneumatic Tool Company, New York City, has announced a new line of "CP" Diesel engines which the manufacturer claims embodies a number of advanced principles. The new



**"CP" Diesel Engine**

engines are four cycle, direct injection, pressure lubricated, full Diesel, and convertible to a gas engine with a few minor changes. The engines have a wide application and are divided into two classifications. One is for general service use and the other for direct connected electric use. A full description of the new engines is given in bulletin No. 779, which will be mailed upon request.

### COATINGS
**Technical Coatings, Inc.**

Technical Coatings, Inc., 11 Park Place, New York, has introduced a line of new coatings which are asserted to be unlike any other available, in that the films formed are absolutely free from porosity and impervious to water and corrosive atmospheric gasses. These finishes are the result of prolonged research at a leading technical institute in which, it is stated, the first vehicle, or "base" to form a strictly impervious film was developed.

This vehicle is described as a combination of pure vegetable gums and heat-treated oils made in an original and unique manner. It contains no linseed oil or synthetic resins. It forms films which are strictly air-tight and water-tight which are elastic and which produce hard films that will not peel, chip, nor crack. For this reason they assertedly rank high in protective value and in preventing corrosion of metals. They are applicable also to wood and to other surfaces such as dry concrete and plaster. Resistance to salt and fresh water and to all degrees of humidity as well as to extremes of temperature is unusual.

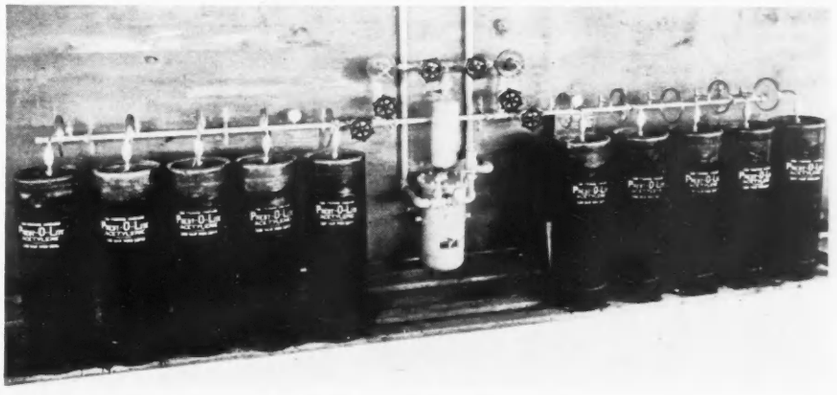
Primers with the new non-porous base are available for various purposes. Metallic zinc is especially good on black and galvanized surfaces and where salt-water exposure is severe. A combination of zinc and aluminum is recommended for fresh-water and humid conditions or where condensation occurs. A balanced red-lead, which is held in suspension permanently, is used as a primer for average conditions. Finishing coats in standard colors are also available, as is a high-gloss, acid-resistant grey. A vehicle for aluminum which requires 25 percent less aluminum powder than other vehicles, is also employed for finishing coats.

### CYLINDER MANIFOLD
**The Linde Air Products Company**

The Linde Air Products Company, New York City, has announced a new wall type acetylene cylinder manifold, the Oxweld Type M-8. It is available in a 10-cylinder unit to which extensions in units of five cylinders or 10 cylinders can be made. The new manifold has been accepted by Underwriters' Laboratories for listing under their re-examination service. The manifold consists of two high-pressure header units. These feed into a central regulation system which delivers acetylene to the distribution piping system at pressures up to 15 pounds per square inch.

The header unit assemblies are composed of heavy seamless steel tubing with forged steel union connections having stainless steel seat inserts. Header valves for cylinder connections are of heavy construction and are threaded directly into the steel tubing header. The extreme ends of the header assembly are closed with forged steel caps. Connections from the header valves to the cylinder valves are made with flexible leads. Each is coiled to provide sufficient flexibility, fitted with an approved Prest-O-Lite flash arrester and is provided with a ball check valve in the header end. This guards against the possibility of acetylene from the header being driven back into an exhausted cylinder.

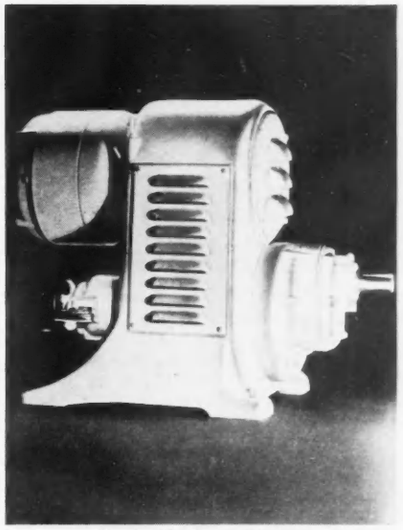
The two high-pressure header assemblies are connected by forged steel unions to a central system of six valves and two regulators for controlling the operation of the manifold. These regulators have been designed for heavy-duty service, and will handle a wide variation in load with less effect on the delivery pressure than would ordinarily be expected.



**Prest-o-lite Cylinder Manifold**

### ELECTRIC MOTOR
**U. S. Electrical Manufacturing Company**

U. S. Electrical Manufacturing Company, Los Angeles, has announced an improved development in variable speed for industrial use, an upright design "Varidrive" electric motor. The new



**U. S. Upright Motor**

design gives the user the option of having the take-off shaft at either the high or low position. The new type also offers a distinct saving in lateral space.

### CASING HEAD
**Jarecki Manufacturing Company**

Jarecki Manufacturing Company, Tulsa, Oklahoma, has announced the new improved Berry Pattern casing head, a high pressure type suitable for any working pressure for which this style head may be used.

Heavily constructed of semi-steel, the head features set-screws inclined at such an angle from the horizontal as to be perpendicular to the beveled edge of the top or tubing support, thus elimi-

nating the tendency of the set-screws to bend and break off.

The casing thread conforms to A.P.I. casing thread standards, and is designed exactly like an A.P.I. casing collar. The thread is full length and is recessed. The side outlets have full-length threads. The head is available in all casing sizes, and for any size tubing.

**Jarecki Casing Head**

The interior of the head is circular, and there are no shoulders to catch tubing collars. The upper interior edge is beveled to prevent catching collars when rerunning tubing. The exterior of the Jarecki Head is circular, the edges of the side-outlet bosses serving as convenient gripping points, for chain tongs when screwing onto casing. The set-screw flange of the head is provided with tapped drain holes to drain oil or water out of the space around the top or tubing support. A descriptive pamphlet on the head and any additional information desired is available.

## BRAKE LINING

### Thermoid Rubber Company

Thermoid Rubber Company, Trenton, New Jersey, has announced the perfection of a new type of brake lining, called Thermoid BX Woven, for use on heavy industrial machinery and equipment. This brake lining has as its base asbestos tape that is woven in a single thickness and therefore, has no plies to separate under severe service conditions. This tape is woven of heavy yarn containing brass wire and is impregnated with a highly heat-resistant bakelite resin. The resultant product is a dense, flexible material consisting of 70 percent asbestos and 30 percent resin. It is ground on the wearing surface, ready for application.

Thermoid BX Woven Brake Lining has a very high coefficient of friction under all conditions of service; gives quick deceleration and "high holding," the manufacturer claims. It will stand heats above 900°F. without deteriorating; and it is claimed there is no material decrease in efficiency in the presence of oil, grease or water.

Recommendations for usage of this brake lining are dictated by service conditions rather than by types of machinery or equipment. In general, it is recommended for services that involve fast deceleration and moderately high heat factors. Such conditions are encountered on draw works, sand reels, winches and clutches.

# This Week with the Industry's EQUIPMENT SUPPLIERS

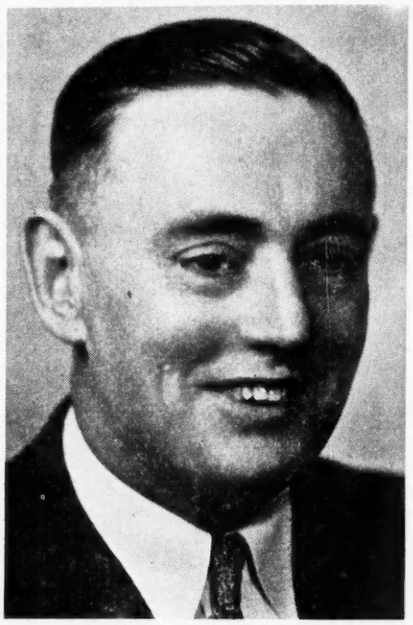
## Two Welding Clinics Planned By Linde Air Products

Educational opportunities for all persons interested in the oxy-acetylene process of welding and cutting are again being offered through the medium of two welding clinics sponsored by The Linde Air Products Company. The first of these clinics will be held October 23, 24, 25, 26 in Sam Houston Convention Hall, Houston, Texas; the second, from October 30 through November 2, will be conducted at the Georgia School of Technology, Atlanta, Georgia.

Similar meetings held last year in Birmingham, Houston, Cleveland and New Orleans drew an attendance of over ten thousand engineers, plant executives, welding operators, and others who have found these clinics the best means of obtaining authoritative information on this subject. Daily programs include individual instruction in all types of oxy-acetylene welding and cutting, demonstrations of everyday applications as well as the latest developments in apparatus and techniques, discussion groups, and motion pictures. Operators and students are given an opportunity to practice under the direction of men experienced in particular phases of the process; executives and engineers can freely discuss their plant maintenance and production problems with qualified experts.

Further information and detailed programs for each of these four-day clinics can be obtained by writing to The Linde Air Products Company, 30 East 42nd Street, New York, N. Y., or to their sales offices in Atlanta, Birmingham, Dallas, Houston, Kansas City, Memphis, New Orleans or Tulsa.

**Harry Potts, vice president, Kerotest Manufacturing Company, Pittsburgh, Pa.; M. H. Griffith, district superintendent, Plymouth Oil Company, Sinton, Texas; and J. D. Isaacks, Kerotest Manufacturing Company, Houston. The picture was taken at Plymouth Oil Company's camp near Sinton, Texas.**



**S. M. "Puny" BLEVINS**

## S. M. "Puny" Blevins Joins Gustin-Bacon

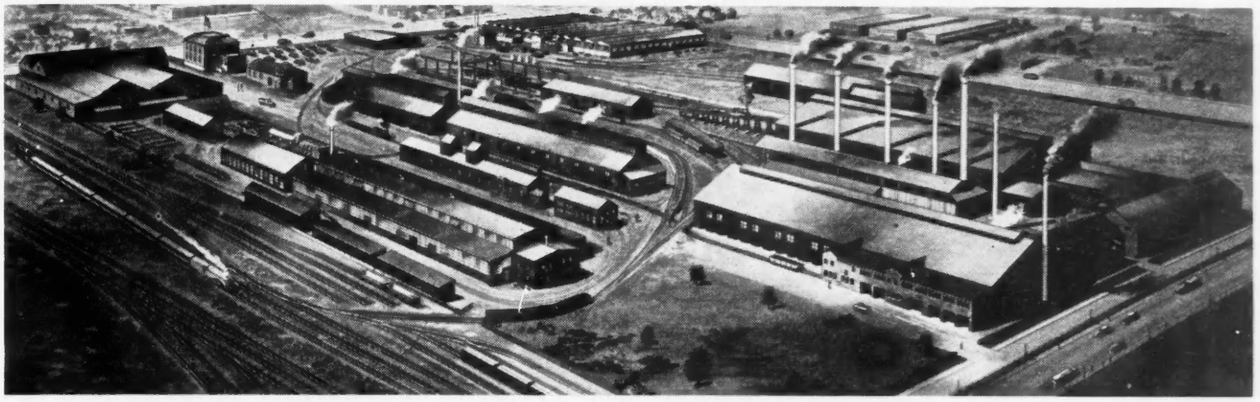
S. M. "Puny" Blevins has joined the sales organization of Gustin-Bacon Manufacturing Company, and will act as a representative of that company in its Tulsa office. This company is the authorized representative of Goodyear in the Mid-Continent and Gulf Coast fields, and manufacturers of Rolagrip Pipe Coupling and Rokflos insulation.

Blevins, who has recently represented Frick-Reid Supply Company in Tulsa, is widely known throughout Oklahoma and in the oil industry.

## Harrisburg Steel Is New Name for Old Concern

The recent adoption of the name Harrisburg Steel Corporation by what was formerly called Harrisburg Pipe & Pipe Bending Company has brought the attention of oil field circles to the growth of this Pennsylvania source of supply for forged and seamless steel oil field products.

Started as a small pipe bending shop in the latter part of the last century, the company is today a prominent figure in the nation's seamless and forged steel industries, and is particularly known for its development work and



**Harrisburg Steel Corporation Plant at Harrisburg, Pennsylvania**

specialization in the manufacture of oil field products.

The sole purpose in adopting the new corporate title is to make the firm name more accurately represent the operations and products of the company. No changes in corporate set-up, or in personnel at the plant or in the field were made, nor are they contemplated.

Harrisburg Steel Corporation operates its own steel plant, rolling mills, forge and machine shops. However, it is the work of its metallurgical laboratories that is perhaps most responsible for the position the company holds in the petroleum industry. For years its metallurgists have devoted much of their attention to the development of metal products for the oil fields.

The first in the series of contributions made by Harrisburg engineers and metallurgists was the seamless steel pipe coupling. This was introduced shortly after the World War. As a result of some masterful engineering this important product was rapidly developed so that by the middle twenties it was being made in all sizes and types.

With complete facilities to manufacture from pig to the finished product, Harrisburg Steel Corporation is a factor in the manufacture of that essential to America's pipe lines—the drop forged steel pipe flange. Constant improvements have attended Harrisburg's method of manufacture. The latest is the introduction of a flange with electro-galvanized threads. This new Harrisburg process provides flanges with threads that are highly proof against galling, stripping, or rusting.

Important as the introduction of the seamless steel coupling was to the oil industry, this development was rivalled by Harrisburg's presentation of the seamless steel pump liner.

The notable collaboration of Harrisburg Steel Corporation's Metallurgical and Engineering Departments in developing special steels to suit the metal requirements of each product has long been a feature of the firm's method of operating. To the fact that Harrisburg controls all its manufacturing processes is also attributed credit for the firm's success.

The executives are Wilbert Wear, president and treasurer; N. W. Cassel, vice-president and secretary; H. B. Liggett, general manager. The board of directors of Harrisburg Steel Corporation has as members Margaret M. Reichert, Charles Garside, W. P. Starkey, L. S. Bishop, and Wilbert Wear.

Main office located at Harrisburg, Pennsylvania, but adequate stocks are carried by distributors.

## DuPont Building Plant To Make Synthetic Rubber

The Rubber Chemicals Division of E. I. du Pont de Nemours & Company has announced a new plant for the manufacture of its synthetic rubber, known as DuPrene, which has been under construction for the past year, is now completed and is producing at the rate of approximately one million pounds a year. The plant is located at Deep Water, New Jersey, opposite Wilmington, Delaware, where all shipping facilities are available both by rail and water. The building of the new plant was made necessary by the greatly increased demand for this synthetic rubber the manufacturer states. Since the announcement of DuPrene in 1931, a great amount of technical work has been done in many industries in applying this synthetic product to their needs.

The petroleum industry has become an important buyer of such compositions. The company reports that they are used as inner liners for tubes in oil and gasoline ship loading hose, gasoline service station hose, gasoline tank truck hose and hose for delivering fuel oil to the home or factory. Packer rubbers and pump pistons of DuPrene composition are used in oil well drilling, and the refineries use it in gaskets and packings.

## Struthers-Wells Company Opens Cleveland Office

The Struthers-Wells Company of Warren, Pennsylvania, is now represented in the Cleveland, Ohio, district. The office is in the Union Building, 1838 Euclid Avenue. B. W. Rogers and P. M. Kline are in charge.

## Hancock Valve Appoints New Distributors

Hancock Valve Division of Consolidated Ashcroft Hancock Company, Bridgeport, Connecticut, has announced the appointment of The Moorlane Company and Frick-Reid Supply Corporation, both of Tulsa, as stock-carrying jobbers.

## Malcolm Black Now With Consolidated Ashcroft Hancock

Malcolm Black recently has completed a four months training course at the Bridgeport and Boston plants of Consolidated Ashcroft Hancock Company, and has been added to the Tulsa office of the company. Mr. Black has had several years of practical experience in the Mid-Continent oil industry.


**Simplex Jacks**
have proved through
**36 *Years of Service***
that their design, materials and construction justify
***"Unconditionally Guaranteed"***
Distributed by Leading Supply Houses
Templeton, Kenly & Co., Ltd. Chicago

**JUST IN CASE**—You were pumping water through a line, and the water stopped—Would you look at the discharge end of the line to see what was wrong with the pump?

**THEN WHY**—Look at the Christmas tree to see why a well stops flowing? Wouldn't it be better to take a look at the bottom of the well?

***Our Bottom Hole Pressure Instruments Can Tell You What Is Wrong at the Bottom . . .***

**PARKS ENGINEERING SERVICE**
HOUSTON * TEXAS
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# Squeaks from the Bull Wheel

Minister (calling) — And what does your mother do for you when you've been a good girl?

Little Girl—She lets me stay home from church.

---

Do you think your father would object to my marrying you?

I don't know. If he's anything like me, he would.

---

A physician attended an old lady from Scotland who had caught a severe cold.

"Did your teeth chatter when you felt the chill coming over you?" asked the doctor.

"I dinna ken, doctor; they were lying on the table."

---

Mrs. Johnson had gone away from home, leaving Mr. Johnson behind, too busy to be able to leave town just then.

On arriving at her destination she missed a gold pin, and wrote to the servant, asking the girl to let her know if she had found anything on the dining room floor. From the servant she received this reply:

"When sweeping the dining room floor this morning, I found thirty matches, four corks, and a pack of cards."

---

Does your orchestra do any request playing?

Yes, sir, we play request numbers at almost every meal.

Then will you please play dominoes until I finish my dinner?

An old German and his wife were given to quarreling. One day, after a particularly unpleasant scene, the old woman remarked with a sigh:

"Vell, I vish I vas in heaven."

"I vish I vas in der beer garten," groaned her husband.

"Ach, ja," cried the old wife. "Always you pick out der best for yourself."

---

A farmer, who went to a large city to see the sights, engaged a room at a hotel, and before retiring asked the clerk about the hours for meals.

"We have breakfast from 7 to 11, dinner from 12 to 3, and supper from 6 to 8," explained the clerk.

"Look here," inquired the farmer in surprise, "what time am I goin' to see the town?"

---

A negro was telling his minister that he had "got religion."

"Dat's fine, brothah; but is you sure that you is going to lay aside sin?" asked the minister.

"Yessuh, Ah's done it already."

"An' is you gwine to pay up all your debts?"

"Wait a minute, pahson. You ain't talking religion now — you is talking business."

---

How's your car running?

Not so good. I can't get her throttled down.

How's your wife?

She's the same, thank you.

On the eve of the Dempsey-Tunney fight they sent Mike Trent, an old timer, who was in Dempsey's stable, over to scout the Tunney training camp and bring back information of value to Dempsey, on Tunney's style and hitting power.

Mike came back with his face beaming.

"It's a set-up," says he. "I seen him readin' a book."

---

"Did you enjoy your dinner, sir?" asked the solicitous restaurant proprietor.

"Yes, except the sweet. That was terrible."

"Did you have the plumb tart or lemon pie?"

"I don't know. It tasted like glue."

"Ah! It was the plum tart. The lemon pie tastes like paste."

---

Conductor — Did you get home all right last night, sir?

Passenger—Of course; why do you ask?

Conductor—Well, when you got up and gave the lady your seat last night, you were the only two in the car.

---

"Is that your college diploma you have framed there?"

"Well, it's a sort of diploma. It's a worthless stock certificate showing that I've been through the school of experience."

---

"My little brother will tell if he sees you kissing me."

"But I'm not kissing you."

"Well, I thought I'd tell you anyway."

---

A Cockney merchant had made a lot of money and decided to spend some of it on a castle in the Highlands of Scotland. On the first evening, the butler approached him and said: "Would you care to have the pipers at dinner, sir?"

"No, thanks," was the casual reply, "but you can tike 'em to the other room, and I'll read 'em liter."

---

They claim that when women adopted shorter skirts it reduced the number of streetcar accidents 50 percent.

Wouldn't it be fine if such accidents could be prevented entirely?

---

"Doctor, I want you to look after my office while I go trout fishing for a week."

"But I've just graduated, Doctor. I've had no experience."

"That's all right, my boy. My practice is strictly fashionable. Tell the men to play golf and ship the women off to Europe."

---

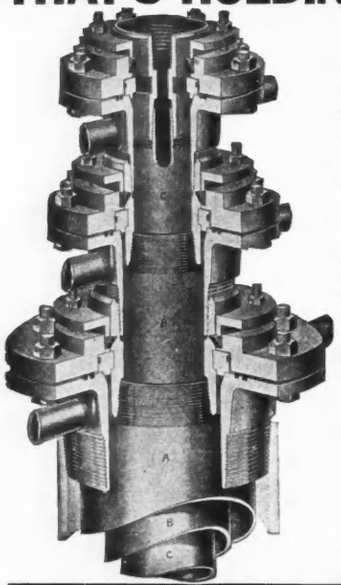
They had been married only a month, and he had left for a few minutes whilst she prepared a salad in the kitchen.

Suddenly a piercing scream rang out, and he rushed to the kitchen, prepared to face he knew not what.

"Whatever is the matter, darling?" he panted.

"It's a—a caterpillar!" she said, with an effort. "Oh, Herbert, what if I had been in the house alone!"


**DON'T ECONOMIZE AT THE POINT THAT'S HOLDING YOUR PIPE STRING**



You wouldn't lay out thousands of dollars for a home, then begin cutting costs on the foundation which is to support it. Yet that's no more false economy than trying to save a few dollars on a Casing Head that is to be the foundation of a well in which a fortune is invested. Equipment which is to support your entire casing load deserves consideration consistent with the importance of its purpose. Particularly is this true when such equipment like the RECTORHEAD, pays for itself in the time it saves in handling your pipe!

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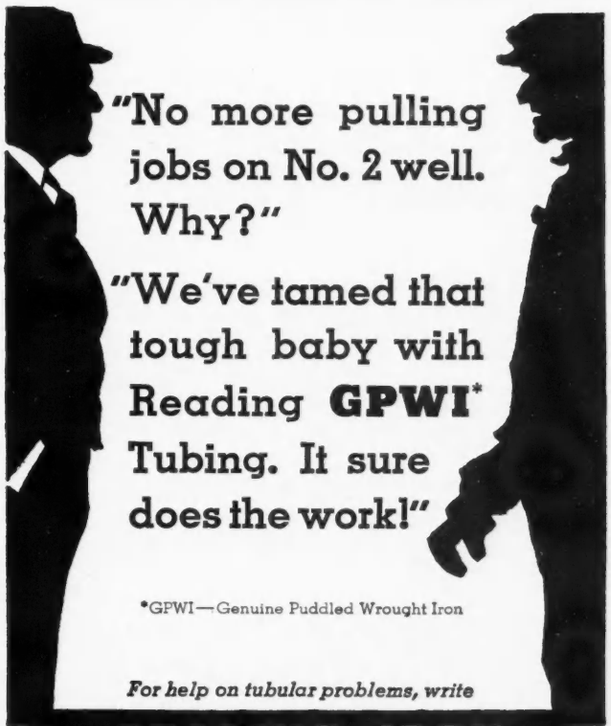

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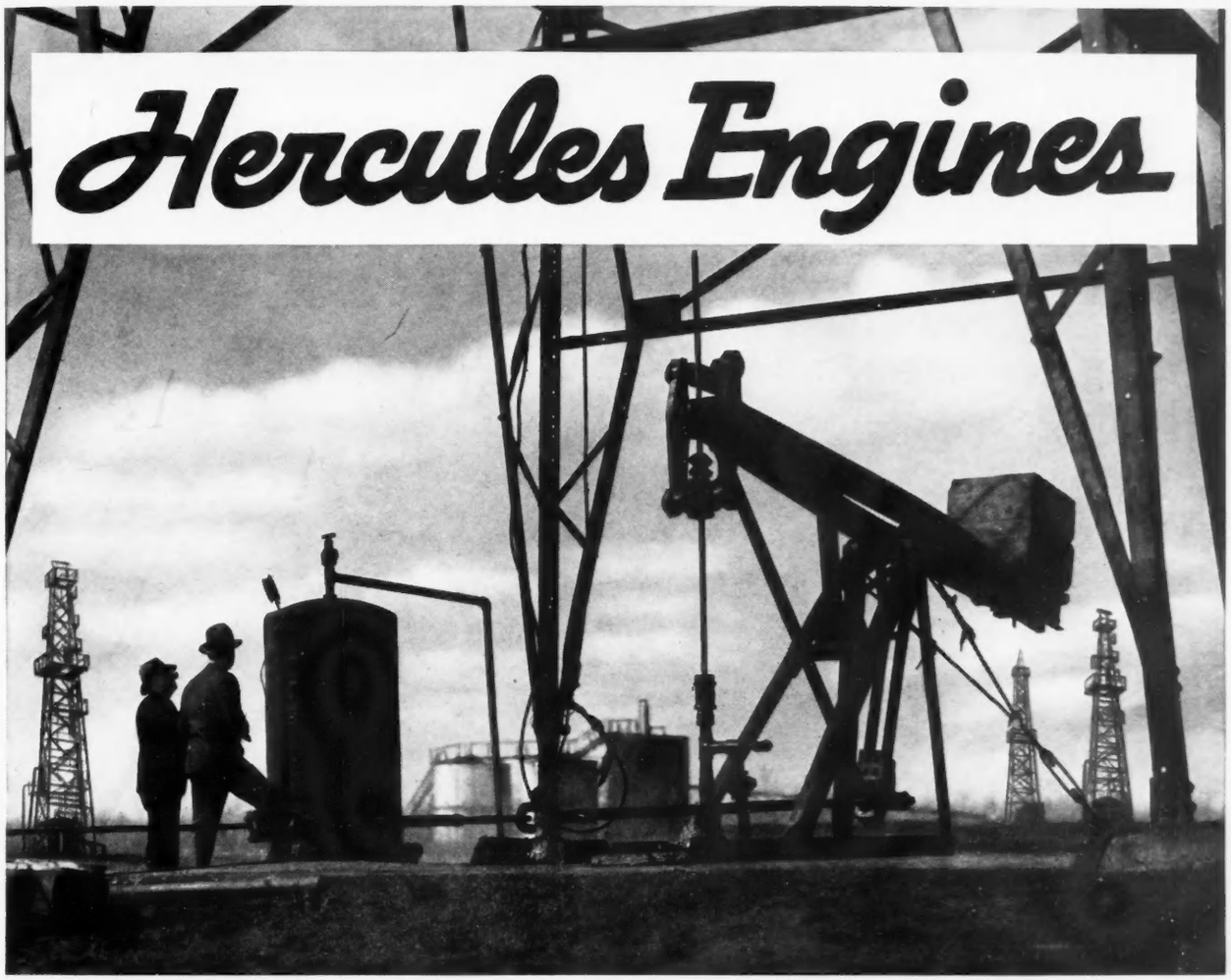

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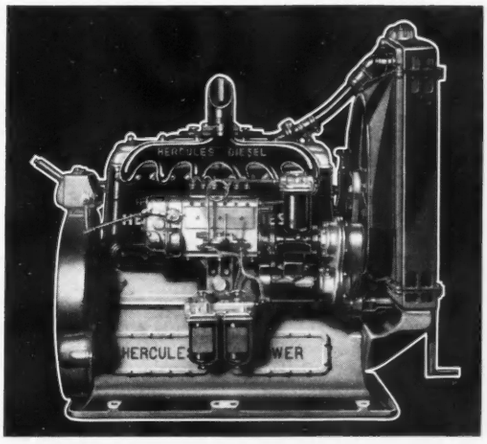


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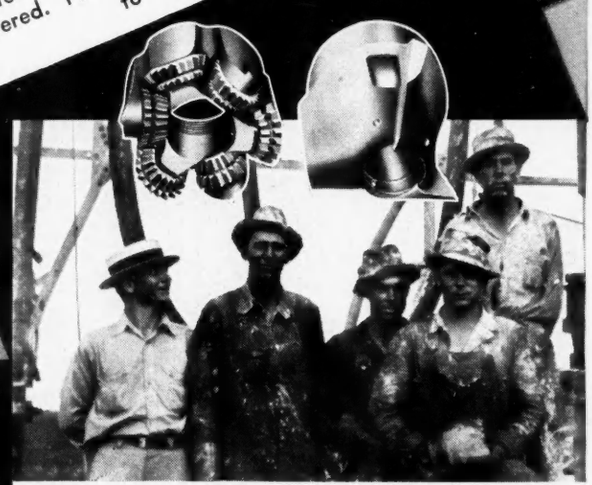

Men in the picture: (left to right) R. L. Johnson, Bill Brinkley, W. M. Fitzgerald, H. H. Rich, M. Laughlin

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